S

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 674426

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	B. M. Hanlon, Inventory & Flowsheet Eng. R3-72, 373-2053	☐ Yes ☒ No	10/24/02

6. Project Title/No./Work Order No.	7. Bldg./Sys./Fac. No.	8. Approval Designator
Waste Tank Summary Report for Month Ending September 30, 2002	N/A	N/A

9. Document Numbers Changed by this ECN (includes sheet no. and rev.)	10. Related ECN No(s).	11. Related PO No.
HNF-EP-0182, Rev. 173	N/A	N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Completed	12d. Restored to Original Condition (Temp. or Standby ECNs only)
☐ Yes (fill out Blk. 12b) ☒ No (NA Blks. 12b, 12c, 12d)	N/A	N/A Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? ☐ Yes ☒ No

Complete revision

Computer generated file

14a. Justification (mark one)	14b. Justification Details
Criteria Change ☐ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☒ Facilitate Const. ☐ Const. Error/Omission ☐ Design Error/Omission ☐	This ECN is being generated to update waste tank farm summary information.

15. Distribution (include name, MSIN, and no. of copies)

Distribution list attached following document

Also: Electronic copy to John Vann only

RELEASE STAMP

NOV 06 2002

DATE: HANFORD RELEASE

STA: 4

ID: 21

A-7900-013-2 (10/97)

A-7900-013-1

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 674426

16. Design Verification Required	17. Cost Impact		18. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
☐ Yes	Additional ☐ $ ____	Additional ☐ $ ____	Improvement ☐ ____
☒ No	Savings ☐ $ ____	Savings ☐ $ ____	Delay ☐ ____

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	____	☐
Environmental Permit	☐	Inventory Adjustment Request	☐	____	☐

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
N/A		

21. Approvals

	Signature	Date		Signature	Date
Design Authority			Design Agent		
Cog. Eng.	B.M. Hanlon BM Hanlon	10/24/02	PE		
Cog. Mgr.	N.W. Kirch NW Kirch	11/6/02	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

WASTE TANK SUMMARY REPORT FOR MONTH ENDING SEPTEMBER 30, 2002

BM HANLON
CH2M HILL Hanford Group, Inc.
Richland, WA 99352
U.S. Department of Energy Contract DE-AC27-99RL14047

EDT/ECN: ECN-674426 UC:
Cost Center: Charge Code:
B&R Code: Total Pages: 66

Key Words: REPORT, WASTE TANK SUMMARY

Abstract: See page iii of document

NOV 06 2002

ID:

21

11/6/02

Release Approval Date Release Stamp

Approved For Public Release

RECORD OF REVISION

(1) Document Number: HNF-EP-0182

Page 1

(2) Title
WASTE TANK SUMMARY REPORT FOR MONTH ENDING SEPTEMBER 30, 2002

Change Control Record

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release: (5) Cog. Engr.	Authorized for Release: (6) Cog. Mgr. Date
153	(7) EDT-631372	BM Hanlon	JS Garfield
174 RS	Incorporation of ECN-674426	BM Hanlon (signature) BM Hanlon	NW Kirch (signature) 11/6/02 NW Kirch

A-7320-005 (10/97)

HNF-EP-0182, Rev. 174

Waste Tank Summary Report for Month Ending September 30, 2002

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

CH2MHILL
Hanford Group, Inc.
Richland, Washington

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC27-99RL14047

Printed in the United States of America

HNF-EP-0182, Rev.174

Waste Tank Summary Report for Month Ending September 30, 2002

B. M. Hanlon
CH2M HILL Hanford Group, Inc.

Date Published
November 2002

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

CH2MHILL
Hanford Group, Inc.

P. O. Box 1500
Richland, Washington

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC27-99RL14047

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WASTE TANK SUMMARY REPORT

B. M. Hanlon

ABSTRACT

This report is the official inventory for radioactive waste stored in underground tanks in the 200 Areas at the Hanford Site. Data that depict the status of stored radioactive waste and tank vessel integrity are contained within the report. This report provides data on each of the existing 177 large underground waste storage tanks and 60 smaller miscellaneous underground storage tanks and special surveillance facilities, and supplemental information regarding tank surveillance anomalies and ongoing investigations. This report is intended to meet the requirement of U.S. Department of Energy Order 435.1 (DOE-HQ, August 28, 2001, Radioactive Waste Management, U.S. Department of Energy-Washington, D.C.) requiring the reporting of waste inventories and space utilization for the Hanford Site Tank Farm tanks.

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SUMMARY

APPENDICES

METRIC CONVERSION CHART		
1 inch	=	2.54 centimeters
1 foot	=	30.48 centimeters
1 gallon	=	3.79 liters
1 ton	=	0.91 metric tons

$$°F = \left(\frac{9}{5}°C\right) + 32$$

1 Btu/h = 0.2931 watts
(International Table)

WASTE TANK SUMMARY REPORT
For Month Ending September 30, 2002

Note: Changes from the previous month are in **bold print**.

I. WASTE TANK STATUS

Double-Shell Tanks (DST)	28 double-shell	10/86 - date last DST tank was completed
Single-Shell Tanks (SST)	149 single-shell	1966 - date last SST tank was completed
Assumed Leaker Tanks	67 single-shell	07/93 - date last Assumed Leaker was identified
Sound Tanks	28 double-shell 82 single-shell	1986 - date DSTs determined sound 07/93 - date last SST determined Sound
Interim Stabilized Tanks[a] (IS)	132 single-shell	08/02 - date last IS occurred
Not Interim Stabilized[b]	17 single-shell	Tanks still to be Interim Stabilized
Isolated-Intrusion Prevention Completed (IP)	108 single-shell	09/96 - date last IP occurred
Misc. Underground Storage Tanks (MUST) and Special Surveillance Facilities (Active)	10 Tanks East Area 7 Tanks West Area	03/01 - last date a tank was added or removed from MUST list
Misc. Underground Storage Tanks (IMUST) and Special Surveillance Facilities (Inactive)[c]	18 Tanks East Area 25 Tanks West Area	11/01 - last date a tank was added or removed from IMUST list

[a] Of the 132 tanks classified as Interim Stabilized, 65 are listed as Assumed Leakers. (See Table B-5)

[b] Two of these tanks are Assumed Leakers (BY-105 and BY-106). (See Table B-5)

[c] Tables C-2 and C-3, the Inactive Miscellaneous Underground Storage Tanks (IMUST) now reflect only those tanks managed by CH2M HILL Hanford Group, Inc. (CHG).

II. WASTE TANK INVESTIGATIONS

This section includes all single- or double-shell tanks or catch tanks which are showing surface level or interstitial liquid level (ILL) decreases, or drywell radiation level increases in excess of established criteria.

A. Assumed Leakers or Assumed Re-leakers: (See Appendix D for definition of "Re-leaker")

This section includes all single- or double-shell tanks or catch tanks for which an off-normal or unusual occurrence report has been issued, or for which a waste tank investigation is in progress, for assumed leaks or re-leaks. Tanks/catch tanks will remain on this list until either

a) completion of Interim Stabilization, b) the updated occurrence report indicates that the tank/catch tank is not an assumed leaker, or c) the investigation is completed.

There are none at this time.

III. SURVEILLANCE AND WASTE TANK STATUS HIGHLIGHTS

A. Single-Shell Tanks Saltwell Jet Pumping (See Table B-1 footnotes for further information)

Tank A-101 - Pumping began May 6, 2000. No pumping occurred between August 2000 and January 2002; pumping resumed January 17, 2002. No pumping in June 2002; the pump failed and was scheduled to be replaced. The pump was replaced and pumping was resumed on July 20, 2002. **A total of 21 Kgallons was pumped in September 2002; a total of 492 Kgallons has been pumped since the start of pumping in May 2000.** (Total Kgallons pumped differs from previous volumes - see Table B-1 footnotes).

Tank AX-101 - Pumping began July 29, 2000. No pumping occurred between August 2000 and March 2001; pumping resumed March 22, 2001. Pumping was shut down on April 3, 2001, due to a transfer line failure. Pumping resumed February 1, 2002. **A total of 1 Kgallon was pumped in September 2002; a total of 345 Kgallons has been pumped since the start of pumping in July 2000.** (Total Kgallons pumped differs from previous volumes - see Table B-1 footnotes).

Tank BY-105 - Pumping began July 11, 2001. Pumping was shut down in August 2001 and resumed in December 2001. No pumping occurred between December and August 2002. Pumping resumed in August 2002. Pumping was shut down on August 30, 2002, because Double-Contained Receiver Tank (DCRT) BX-244 was full. **Pumping was resumed September 1, 2002, after the waste was transferred. A total of 12 Kgallons was pumped in September 2002; a total of 45 Kgallons has been pumped from this tank since the start of pumping in July 2001.**

As of September 13, 2002, this tank is being evaluated for meeting Interim Stabilization criteria.

Tank BY-106 - Pumping began in August 1995 and was shut down in October 1995 due to an Unreviewed Safety Question (USQ) evaluation for flammable gas concerns. Pumping was restarted July 11, 2001. Pumping was shut down in August 2001 and resumed in November 2001. In December 2001, a total of 5.3 Kgallons was pumped from this tank, resulting in a total of 87.4 Kgallons having been pumped since the start of pumping in August 1995. No pumping occurred between December 2001 and July 2002. Pumping resumed in August 2002. Pumping was shut down on August 30, 2002, because DCRT BX-244 was full. **Pumping was resumed on September 1, 2002, after the waste was transferred. A total of 13 Kgallons was pumped in September 2002; a total of 114 Kgallons has been pumped from this tank since the start of pumping in August 1995.**

Tank S-101 - Pumping began July 27, 2002. A total of 3 Kgallons was pumped in August 2002; a total of 9 Kgallons has been pumped from this tank since the start of pumping in July 2002. Pumping was shut down on August 7, 2002 in support of S-107 field work. **No pumping in September 2002.**

Tank S-102 - Pumping problems have forced many shutdowns. The pump was replaced and pumping resumed on February 19, 2000. Problems with the new pump forced a shutdown on March 23, 2000. Pumping was interrupted in early June 2000. Pumping was shut down due to equipment failure; the lower piping needed to be replaced. No pumping occurred until May 12, 2002, when pumping resumed. Pumping was manually shut down May 18, 2002 (see Table B-1 footnotes). Pumping started again on June 30, 2002, but the water added for pump priming/equipment flushes resulted in 0 Kgallons pumped in June 2002. **The water added for pump priming/equipment flushes resulted in 0 Kgallons pumped in September 2002; a total of 61 Kgallons has been pumped from this tank since the start of pumping in March 1999.**

Tank S-107 - Pumping began September 4, 2002. A total of 33 Kgallons was pumped from this tank in September 2002.

Tank S-111 - Pumping resumed December 18, 2001. (3 Kgallons were pumped in October 1975). The pump was shut down May 18, 2002. (See Table B-1 footnotes). Pumping started again on June 30, 2002, but the water added for pump priming/equipment flushes resulted in 0 Kgallons pumped in June 2002. **A total of 7 Kgallons was pumped in September 2002; a total of 55 Kgallons has been pumped from this tank since the start of pumping in October 1975 (includes 3 Kgallons pumped in 1975).**

Tank S-112 - Pumping resumed September 21, 2002. (125 Kgallons were pumped in August 1978.) A total of 2 Kgallons was pumped in September 2002; a total of 127 Kgallons has been pumped from this tank since the start of pumping in August 1978.

Tank SX-101 - Pumping began November 22, 2000. The pump failed on December 9, 2000, and pumping was shut down. Pumping resumed in September 2001 following replacement of the saltwell pump and lower piping. Pumping was shut down in November 2001 due to a high motor bearing temperature and low pump pressures. A total of 32 Kgallons has been pumped from this tank since the start of pumping in November 2000. No pumping has occurred since November 2001. Saltwell pumping of all SX farm tanks was suspended January 9, 2002, due to a leak in the hose-in-hose transfer line. Pumping was attempted in July 2002; the jet pump is thought to be plugged. No pumping has occurred since January 2002.

Tank SX-102 - Pumping began December 15, 2001; a total of 1 Kgallon was pumped. During January 2002, there was a net removal of 0 Kgallons of waste. Saltwell pumping of all SX farm tanks was suspended January 9, 2002, due to a leak in the hose-in-hose transfer line. Pumping resumed in July 2002 through another transfer line; pumping was shut down on August 14, 2002. Pumping was restarted in September 2002. **A total of 9 Kgallons was pumped in September 2002; a total of 39 Kgallons has been pumped since the start of pumping in December 2001.**

Tank SX-103 - Pumping began October 26, 2000. Pumping was shut down on April 22, 2001, due to leak detector and subsequent shielding problems in the pump pit. Pumping resumed on September 14, 2001 and was shut down on November 16, 2001. No pumping occurred between November 2001 and July 2002. Pumping was shut down on August 14, 2002. **Pumping was restarted on September 1, 2002, and shut down on September 17, 2002, per engineering instructions. A total of 1 Kgallons was pumped in September 2002; a total of 134 Kgallons has been pumped from this tank since the start of pumping in October 2000.**

As of September 17, 2002, this tank is being evaluated for meeting Interim Stabilization criteria.

Tank U-107 - Pumping began September 29, 2001. Pumping was shut down in November 2001 until a pressure test requirement was met. No pumping occurred between November 2001 and June 2002. Pumping was restarted June 28, 2002. **Pumping was shut down on September 11, 2002. It has been determined that the pump has failed; it is expected to be replaced in October 2002. A total of 5 Kgallons was pumped in September 2002; a total of 91 Kgallons has been pumped since the start of pumping in September 2001.**

Tank U-108 – Pumping began December 2, 2001. Pumping was shut down due to a partially plugged transfer line. Pumping was restarted briefly on May 18, 2002. The pump shut down several times due to alarming; various Trouble Alarms were intermittently activated from May 18 through May 31, 2002. (See Table B-1 footnotes for further information). The pump was restarted June 24, 2002, but was shut down due to transfer line flow restrictions. **Pumping resumed in July 2002 and was shut down on September 30, 2002. A total of 10 Kgallons was pumped in September 2002; a total of 33 Kgallons has been pumped from this tank since the start of pumping in December 2001.**

Tank U-111 Pumping began June 14, 2002. **A total of 17 Kgallons was pumped in September 2002; a total of 67 Kgallons has been pumped from this tank since the start of pumping in June 2002.**

B. Gas Release Event (GRE)

Tank SY-103 exhibited a small gas release event on September 2, 2002. The hydrogen level increased to 2060 ppm at approximately 0800 on September 2 and then decayed off to 25% of this peak value in one day. The associated level drop of approximately 1 inch is consistent with the 0.8-inch average level drop observed for past gas release events in this tank.

APPENDIX A

DOUBLE-SHELL TANKS

MONTHLY SUMMARY TABLES

TABLE A-1. INVENTORY AND STATUS BY TANK - DOUBLE-SHELL TANKS

September 30, 2002

TANK	TANK INTEGRITY	WASTE TYPE	EQUIVA-LENT WASTE INCHES	TOTAL WASTE (Kgal)	AVAIL. SPACE (1) (Kgal)	WASTE VOLUMES: SUPER-NATANT LIQUID (Kgal)	WASTE VOLUMES: SLUDGE (Kgal)	WASTE VOLUMES: SALTCAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST SAMPLING EVENT: LAST CORE SAMPLE	LAST SAMPLING EVENT: LAST GRAB SAMPLE	LAST SAMPLING EVENT: LAST VAPOR SAMPLE	SEE FOOTNOTES FOR THESE CHANGES
AN TANK FARM STATUS													
AN-101	SOUND	DN	92.0	253	891	253	0	0	06/30/99		04/98	04/01	
AN-102	SOUND	CC	392.0	1078	66	938	0	140	12/31/01	06/90	05/02		
AN-103	SOUND	DSS	348.7	959	185	500	0	459	06/30/99	02/00	09/95		
AN-104	SOUND	DSSF	383.3	1054	90	609	0	445	06/30/99	08/00			
AN-105	SOUND	DSSF	410.2	1128	16	636	0	492	06/30/99	12/01			
AN-106	SOUND	CC	16.7	46	1098	29	0	17	06/30/99		07/02	06/01	
AN-107	SOUND	CC	394.2	1084	60	847	0	237	09/30/02		08/02	12/94	
7 DOUBLE-SHELL TANKS		TOTALS:		5602	2406	3812	0	1790					
AP TANK FARM STATUS													
AP-101	SOUND	DSSF	405.1	1114	30	1114	0	0	05/01/89		02/00	07/01	
AP-102	SOUND	DN	232.4	639	505	616	23	0	05/31/02		12/01	03/01	
AP-103	SOUND	CC	102.2	281	863	281	0	0	05/31/96		08/99		
AP-104	SOUND	CC	402.2	1106	38	1106	0	0	10/13/88		01/01	11/00	
AP-105	SOUND	DSSF	411.6	1132	12	1043	0	89	06/30/99	03/02	09/96		
AP-106	SOUND	CP	414.5	1140	4	1140	0	0	10/13/88		05/98	05/01	
AP-107	SOUND	DC	409.8	1127	17	1127	0	0	10/13/88		07/02		
AP-108	SOUND	DN	412.7	1135	9	1135	0	0	10/13/88		03/02		
8 DOUBLE-SHELL TANKS		TOTALS:		7674	1478	7562	23	89					
AW TANK FARM STATUS													
AW-101	SOUND	DSSF	410.2	1128	16	740	0	388	10/31/00	05/96	07/00		
AW-102	SOUND	EVFD	386.9	1064	64	1034	30	0	01/31/01		01/99		
AW-103	SOUND	DSSF/NCRW	400.4	1101	43	788	273	40	06/30/99	09/99	09/94		
AW-104	SOUND	DN	113.8	313	831	90	66	157	06/30/99	09/01	08/00		
AW-105	SOUND	DN/NCRW	154.2	424	720	161	263	0	06/30/99	09/01	08/96		
AW-106	SOUND	SRCVR	107.3	295	849	56	0	239	06/30/99	03/01			
6 DOUBLE-SHELL TANKS		TOTALS:		4325	2523	2869	632	824					

TABLE A-1. INVENTORY AND STATUS BY TANK - DOUBLE-SHELL TANKS

September 30, 2002

TANK	TANK INTEGRITY	WASTE TYPE	EQUIVALENT WASTE INCHES	TOTAL WASTE (Kgal)	AVAIL. SPACE (1) (Kgal)	WASTE VOLUMES: SUPERNATANT LIQUID (Kgal)	SLUDGE (Kgal)	SALTCAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST SAMPLING EVENT: LAST CORE SAMPLE	LAST GRAB SAMPLE	LAST VAPOR SAMPLE	SEE FOOTNOTES FOR THESE CHANGES
AY TANK FARM STATUS													
AY-101	SOUND	DC	65.8	181	820	85	96	0	06/30/99	04/02	02/01		
AY-102	SOUND	DN	246.5	678	323	507	171	0	07/31/02	04/02	03/01	12/98	
2 DOUBLE-SHELL TANKS			TOTALS:	859	1143	592	267	0					
AZ TANK FARM STATUS													
AZ-101	SOUND	AW	362.5	997	4	945	52	0	06/30/98	08/00	06/00	04/00	
AZ-102	SOUND	AW	360.4	991	10	886	105	0	06/30/99	07/02	10/01		
2 DOUBLE-SHELL TANKS			TOTALS:	1988	14	1831	157	0					
SY TANK FARM STATUS													
SY-101	SOUND	CC	351.6	967	177	692	0	275	06/30/99	03/99	06/00		
SY-102	SOUND	DN/PT	377.5	1038	44	893	145	0	06/30/99	11/00	04/02	09/00	
SY-103	SOUND	CC	268.4	738	406	396	0	342	06/30/99	03/00			
3 DOUBLE-SHELL TANKS			TOTALS:	2743	627	1981	145	617					
GRAND TOTAL				23191	8191	18647	1224	3320					

Note: +/- 1 Kgal differences are the result of computer rounding

Maximum volume limits per HNF-SD-WM-SP-012, "Tank Farm Contractor and Utilization Plan," Rev. 3, dated September 27, 2001

Tank Farms		Exceptions:	
AN, AP, AW	1144 Kgal	AW-102	1128 Kgal
AY, AZ	1001 Kgal		
SY	1144 Kgal	SY-102	1082 Kgal

NOTE: Supernatant + Sludge (includes liquid) + Saltcake (includes liquid) = Total Waste

(1) Available Space volumes include restricted space

TABLE A-2. DOUBLE-SHELL TANK SPACE ALLOCATION, INVENTORY AND WASTE RECEIPTS (ALL VOLUMES IN KGALS)

September 30, 2002

TOTAL DST CAPACITY	
NON-AGING =	27,378
AGING =	4,004
TOTAL=	31,382

MONTHLY INVENTORY CHANGE	
INVENTORY ON 09/30/02	23,191
INVENTORY ON 08/31/02	22,960
CHANGE =	231

CALCULATION OF REMAINING SPACE	
TOTAL DST CAPACITY =	31,382
WASTE INVENTORY =	-22,960
DEDICATED OPERATIONAL SPACE =	-1,462
RESTRICTED USAGE SPACE =	-2,846
EMERGENCY SPACE ALLOCATION =	-1,144
SPACE ALLOCATED FOR WASTE TREATMENT PLANT RETURNS =	-1,144
REMAINING AVAILABLE SPACE =	1,826

SEPTEMBER DST WASTE RECEIPTS					
FACILITY GENERATIONS		OTHER GAINS ASSOCIATED WITH		OTHER LOSSES ASSOCIATED WITH	
SALTWELL LIQUID (WEST)	128	SLURRY	5	SLURRY	-6
(*)SALTWELL LIQUID (EAST)	100	CONDENSATE	6	CONDENSATE	-4
TANK FARMS	6	INSTRUMENTATION	5	INSTRUMENTATION	-3
TOTAL =	234	UNKNOWN	1	UNKNOWN	-7
		TOTAL=	17	TOTAL=	-20

(*) Includes 244BX transfers to Tank AP-102

PROJECTED VERSUS ACTUAL WASTE VOLUMES						
	ACTUAL DST WASTE RECEIPTS	PROJECTED DST WASTE RECEIPTS (1)	MISC. DST CHANGES (+/-)	PROJECTED WVR	NET DST CHANGE	TOTAL DST VOLUME
10/01	74	114	-5	0	69	20,993
11/01	113	388	2	0	115	21,108
12/01	35	647	-12	0	23	21,131
01/02	100	108	-8	0	92	21,223
02/02	599	370	-16	0	582	21,805
03/02	190	420	-11	0	179	21,984
04/02	202	412	4	0	206	22,190
05/02	174	591	-16	0	158	22,348
06/02	116	486	5	0	121	22,469
07/02	233	324	5	0	238	22,707
08/02	259	240	-6	0	253	22,960
09/02	234	192	-3	0	231	23,191

(1) The "PROJECTED DST WASTE RECEIPTS" and "WVR" numbers were updated in February 2002. The projected volumes will be updated as new and/or more accurate information is obtained. The projected volumes reported are the most current available, as supplied by system engineers.

(2) Total Waste Volume Reduction (WVR) Through the 242A Evaporator Since Restart on 4/15/94 = 11,668 Kgals

TABLE A-3. DOUBLE-SHELL TANKS MONITORING FREQUENCY STATUS (28 Tanks)

September 30, 2002

Legend:	
E	ENRAF Level Gauge
D, W, Q	Daily, Weekly, Quarterly

All data were collected in accordance with Technical Safety Requirement (TSR) and Operating Specification Documents (OSD).

Tank	Surface Level Device (1)	Frequency	Thermocouple Tree Risers (2)	Temperature Frequency	Annulus Leak Detector Probes	Leak Detector Frequency
AN-101	E*	D	4A*	W	3	D
AN-102	E*	D	4A*	W	3	D
AN-103	E*	D	4A*, 15A*	W	3	D
AN-104	E*	D	4A*, 15A*	W	3	D
AN-105	E*	D	4A*, 15A*	W	3	D
AN-106	E*	D	4A*	W	3	D
AN-107	E*	D	4A*	W	3	D
AP-101	E*	D	4	W	3	D
AP-102	E*	D	4	W	3	D
AP-103	E*	D	4	W	3	D
AP-104	E*	D	4	W	3	D
AP-105	E*	D	4	W	3	D
AP-106	E*	D	4	W	3	D
AP-107	E*	D	4	W	3	D
AP-108	E*	D	4	W	3	D
AW-101	E*	D	6*, 17*	W	3	D
AW-102	E*	D	6*	W	3	D
AW-103	E*	D	6*	W	3	D
AW-104	E*	D	6*	W	3	D
AW-105	E*	D	6*	W	3	D
AW-106	E*	D	6*	W	3	D
AY-101	E*	D	Multiple*	W	3	D
AY-102	E*	D	Multiple*	W	3	D
AZ-101	E	D	Multiple*	W	3	D
AZ-102	E	D	Multiple*	W	3	D
SY-101	E*	D	17B*, 17C*	W	3	D
SY-102	E*	D	4A*	W	3	D
SY-103	E*	D	4A*, 17B*	W	3	D

Footnotes:

1. Any ENRAF (E) or thermocouple tree riser that is followed by an asterisk (*) is connected to TMACS for continuous remote monitoring. If there is no asterisk, only manual readings are obtained. All equipment connected to TMACS collects data multiple times per day, regardless of required frequency.
2. AY & AZ Farms have too many thermocouple elements to list individually. Most are monitored electronically.

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APPENDIX B

SINGLE-SHELL TANKS

MONTHLY SUMMARY TABLES

TABLE B-1. INVENTORY AND STATUS BY TANK - SINGLE-SHELL TANKS

September 30, 2002

The SST volume estimates were derived from the Best-Basis Inventory baselining task, dated January 1, 2002, and represent the official waste volume estimates for Hanford's waste storage tanks. The interstitial liquid estimates for pumpable liquid remaining (PLR) and drainable interstitial liquid (DIL) were calculated from these volumes using the waste phase drainable porosities per Updated Liquid Volume Estimates (HNF-2978 and RPP-5556).

HNF-2978, Rev. 4, resulted in changes to tanks A-101 and AX-101, effective June 30, 2002.

Sludge and Saltcake total volumes include Retained Gas.

				WASTE VOLUMES									PHOTOS/VIDEOS		
TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
A TANK FARM STATUS															
A-101	SOUND	/PI	502	(a)	(a)	21	492	(a)	(a)	3	482	08/31/02	08/21/85		(a)
A-102	SOUND	IS/PI	38	2	9	0	40	11	2	0	36	01/01/02	07/20/89		
A-103	ASMD LKR	IS/IP	370	4	87	0	111	91	84	2	364	01/01/02	12/28/88		
A-104	ASMD LKR	IS/IP	28	0	0	0	0	4	0	28	0	01/27/78	06/25/86		
A-105	ASMD LKR	IS/IP	37	0	0	0	0	0	0	37	0	10/31/00	08/20/86		
A-106	SOUND	IS/IP	79	0	9	0	0	9	1	50	29	01/01/02	08/19/86		
6 TANKS - TOTALS			1054							120	911				
AX TANK FARM STATUS															
AX-101	SOUND	/PI	385	(b)	(b)	1	345	(b)	(b)	3	382	09/30/02	08/18/87		(b)
AX-102	ASMD LKR	IS/IP	30	0	0	0	13	0	0	6	24	01/01/02	06/05/89		
AX-103	SOUND	IS/IP	108	0	22	0	0	22	10	8	100	01/01/02	08/13/87		
AX-104	ASMD LKR	IS/IP	7	0	0	0	0	0	0	7	0	01/01/02	08/18/87		
4 TANKS - TOTALS			530							24	506				
B TANK FARM STATUS															
B-101	ASMD LKR	IS/IP	109	0	20	0	0	20	16	28	81	01/01/02	05/19/83		
B-102	SOUND	IS/IP	32	4	7	0	0	11	4	0	28	06/30/99	08/22/85		
B-103	ASMD LKR	IS/IP	56	0	10	0	0	10	2	1	55	01/01/02	10/13/88		
B-104	SOUND	IS/IP	374	0	45	0	0	45	41	309	65	01/01/02	10/13/88		
B-105	ASMD LKR	IS/IP	290	0	20	0	0	20	16	28	262	01/01/02	05/19/88		
B-106	SOUND	IS/IP	122	1	8	0	0	9	2	121	0	01/01/02	02/28/85		
B-107	ASMD LKR	IS/IP	161	0	23	0	0	23	18	86	75	01/01/02	02/28/85		
B-108	SOUND	IS/IP	92	0	19	0	0	19	15	27	65	01/01/02	05/10/85		
B-109	SOUND	IS/IP	125	0	23	0	0	23	19	50	75	01/01/02	04/02/85		
B-110	ASMD LKR	IS/IP	245	1	27	0	0	28	23	244	0	01/01/02	03/17/88		
B-111	ASMD LKR	IS/IP	242	1	23	0	0	24	20	241	0	01/01/02	06/26/85		
B-112	ASMD LKR	IS/IP	35	3	2	0	0	5	1	15	17	01/01/02	05/29/85		
B-201	ASMD LKR	IS/IP	30	0	5	0	0	5	0	30	0	01/01/02	11/12/86	06/23/95	
B-202	SOUND	IS/IP	29	0	4	0	0	4	0	29	0	01/01/02	05/29/85	06/15/95	
B-203	ASMD LKR	IS/IP	52	1	5	0	0	6	1	51	0	01/01/02	11/13/86		
B-204	ASMD LKR	IS/IP	51	1	5	0	0	6	1	50	0	01/01/02	10/22/87		
16 TANKS - TOTALS			2045							1310	723				

TABLE B-1. INVENTORY AND STATUS BY TANK - SINGLE-SHELL TANKS

September 30, 2002

The SST volume estimates were derived from the Best-Basis Inventory baselining task, dated January 1, 2002, and represent the official waste volume estimates for Hanford's waste storage tanks. The interstitial liquid estimates for pumpable liquid remaining (PLR) and drainable interstitial liquid (DIL) were calculated from these volumes using the waste phase drainable porosities per Updated Liquid Volume Estimates (HNF-2978 and RPP-5556).

HNF-2978, Rev. 4, resulted in changes to tanks BY-105 and BY-106, effective July 30, 2002.

Sludge and Saltcake total volumes include Retained Gas.

				WASTE VOLUMES									PHOTOS/VIDEOS		
TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							BX TANK FARM STATUS								
BX-101	ASMD LKR	IS/IP/CCS	48	0	4	0	0	4	0	48	0	01/01/02	11/24/88	11/10/94	
BX-102	ASMD LKR	IS/IP/CCS	112	0	0	0	0	0	0	112	0	04/28/82	09/18/85		
BX-103	SOUND	IS/IP/CCS	73	11	4	0	0	15	11	62	0	11/29/83	10/31/86	10/27/94	
BX-104	SOUND	IS/IP/CCS	100	3	4	0	17	7	3	97	0	01/01/02	09/21/89		
BX-105	SOUND	IS/IP/CCS	72	5	4	0	15	9	5	67	0	01/01/02	10/23/86		
BX-106	SOUND	IS/IP/CCS	38	0	4	0	14	4	0	38	0	08/01/95	05/19/88	07/17/95	
BX-107	SOUND	IS/IP/CCS	347	0	37	0	23	37	33	347	0	09/18/90	09/11/90		
BX-108	ASMD LKR	IS/IP/CCS	31	0	4	0	0	4	0	31	0	01/31/01	05/05/94		
BX-109	SOUND	IS/IP/CCS	193	0	25	0	8	25	20	193	0	09/17/90	09/11/90		
BX-110	ASMD LKR	IS/IP/CCS	205	1	35	0	2	36	31	65	139	01/01/02	07/15/94	10/13/94	
BX-111	ASMD LKR	IS/IP/CCS	189	0	6	0	117	6	2	32	157	01/01/02	05/19/94	02/28/95	
BX-112	SOUND	IS/IP/CCS	164	1	9	0	4	10	7	163	0	01/01/02	09/11/90		
12 TANKS - TOTALS			1572							1255	296				
							BY TANK FARM STATUS								
BY-101	SOUND	IS/IP	370	0	24	0	36	24	20	37	333	01/01/02	09/19/89		
BY-102	SOUND	IS/PI	277	0	40	0	159	40	33	0	277	05/01/95	09/11/87	04/11/95	
BY-103	ASMD LKR	IS/PI	416	0	58	0	96	58	53	9	407	01/01/02	09/07/89	02/24/97	
BY-104	SOUND	IS/IP	358	0	51	0	330	51	46	45	313	01/01/02	04/27/83		
BY-105	ASMD LKR	/PI	458	(c)	(c)	12	45	(c)	(c)	48	410	09/30/02	07/01/86		(c)
BY-106	ASMD LKR	/PI	511	(d)	(d)	13	114	(d)	(d)	32	479	09/30/02	11/04/82		(d)
BY-107	ASMD LKR	IS/IP	272	0	42	0	56	42	37	15	257	01/01/02	10/15/86		
BY-108	ASMD LKR	IS/IP	222	0	33	0	28	33	26	40	182	01/01/02	10/15/86		
BY-109	SOUND	IS/PI	277	0	37	0	157	37	32	24	253	01/01/02	06/18/97		
BY-110	SOUND	IS/IP	366	0	20	0	213	20	15	43	323	01/01/02	07/26/84		
BY-111	SOUND	IS/IP	302	0	14	0	313	14	6	0	302	01/01/02	10/31/86		
BY-112	SOUND	IS/IP	286	0	24	0	116	24	12	2	284	03/31/02	04/14/88		
12 TANKS - TOTALS			4115							295	3820				

TABLE B-1. INVENTORY AND STATUS BY TANK - SINGLE-SHELL TANKS

September 30, 2002

The SST volume estimates were derived from the Best-Basis Inventory baselining task, dated January 1, 2002, and represent the official waste volume estimates for Hanford's waste storage tanks. The interstitial liquid estimates for pumpable liquid remaining (PLR) and drainable interstitial liquid (DIL) were calculated from these volumes using the waste phase drainable porosities per Updated Liquid Volume Estimates (HNF-2978 and RPP-5556)

HNF-2978, Rev. 4, resulted in changes to tanks C-103, S-101, S-102, S-107, S-111, and S-112, effective June 30, 2002.

Sludge and Saltcake total volumes include Retained Gas.

				WASTE VOLUMES									PHOTOS/VIDEOS		
TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							C TANK FARM STATUS								
C-101	ASMD LKR	IS/IP	88	0	4	0	0	4	0	88	0	11/29/83	11/17/87		
C-102	SOUND	IS/IP	316	0	62	0	47	62	55	316	0	09/30/95	05/18/76	08/24/95	
C-103	SOUND	/PI	202	77	10	0	0	85	80	125	0	01/01/02	07/28/87		
C-104	SOUND	IS/IP	259	0	29	0	0	29	25	259	0	01/01/02	07/25/90		
C-105	SOUND	IS/PI	132	0	10	0	0	10	6	132	0	02/29/00	08/05/94	08/30/95	
C-106	SOUND	/PI	36	30	1	0	0	31	27	6	0	10/31/99	08/05/94	08/08/94	
C-107	SOUND	IS/IP	248	0	30	0	41	30	25	248	0	01/01/02	00/00/00		
C-108	SOUND	IS/IP	66	0	4	0	0	4	0	66	0	02/24/84	12/05/74	11/17/94	
C-109	SOUND	IS/IP	63	0	4	0	0	4	0	63	0	01/01/02	01/30/76		
C-110	ASMD LKR	IS/IP	178	1	37	0	16	38	30	177	0	06/14/95	08/12/86	05/23/95	
C-111	ASMD LKR	IS/IP	57	0	4	0	0	4	0	57	0	04/28/82	02/25/70	02/02/95	
C-112	SOUND	IS/IP	104	0	6	0	0	6	1	104	0	09/18/90	09/18/90		
C-201	ASMD LKR	IS/IP	1	0	0	0	0	0	0	1	0	01/01/02	12/02/86		
C-202	ASMD LKR	IS/IP	1	0	0	0	0	0	0	1	0	01/19/79	12/09/86		
C-203	ASMD LKR	IS/IP	3	0	0	0	0	0	0	3	0	01/01/02	12/09/86		
C-204	ASMD LKR	IS/IP	3	0	0	0	0	0	0	3	0	04/28/82	12/09/86		
16 TANKS - TOTALS			1757							1649	0				
							S TANK FARM STATUS								
S-101	SOUND	/PI	414	(e)	(e)	3	9	(e)	(e)	122	292	08/31/02	03/18/88		(e)
S-102	SOUND	/PI	443	(f)	(f)	0	61	(f)	(f)	22	421	07/31/02	03/18/88		(f)
S-103	SOUND	IS/PI	237	1	45	0	24	46	39	9	227	03/24/00	06/01/89	01/28/00	
S-104	ASMD LKR	IS/IP	288	0	49	0	0	49	45	132	156	12/20/84	12/12/84		
S-105	SOUND	IS/IP	406	0	42	0	114	42	33	2	404	01/01/02	04/12/89		
S-106	SOUND	IS/PI	455	0	26	0	204	26	18	0	455	02/28/01	03/17/89	01/28/00	
S-107	SOUND	/PI	343	(g)	(g)	33	33	(g)	(g)	323	20	09/30/02	03/12/87		(g)
S-108	SOUND	IS/PI	550	0	4	0	200	4	0	5	545	01/01/02	03/12/87	12/03/96	
S-109	SOUND	IS/PI	533	0	16	0	34	16	12	13	520	06/30/01	12/31/98		
S-110	SOUND	IS/PI	389	0	30	0	203	30	27	96	293	01/01/02	03/12/87	12/11/96	
S-111	SOUND	/PI	489	(h)	(h)	7	55	(h)	(h)	76	413	09/30/02	08/10/89		(h)
S-112	SOUND	/PI	620	(i)	(i)	2	127	(i)	(i)	6	614	09/30/02	03/24/87		(i)
12 TANKS - TOTALS			5167							806	4360				

TABLE B-1. INVENTORY AND STATUS BY TANK - SINGLE-SHELL TANKS

September 30, 2002

The SST volume estimates were derived from the Best-Basis Inventory baselining task, dated January 1, 2002, and represent the official waste volume estimates for Hanford's waste storage tanks. The interstitial liquid estimates for pumpable liquid remaining (PLR) and drainable interstitial liquid (DIL) were calculated from these volumes using the waste phase drainable porosities per Updated Liquid Volume Estimates (HNF-2978 and RPP-5556).

HNF-2978, Rev. 4, resulted in changes to tanks SX-101, SX-102, and SX-111, effective June 30, 2002.

Sludge and Saltcake total volumes include Retained Gas.

				WASTE VOLUMES									PHOTOS/VIDEOS		
TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
							SX TANK FARM STATUS								
SX-101	SOUND	/PI	413	(j)	(j)	0	32	(j)	(j)	144	269	08/31/02	03/10/89		(j)
SX-102	SOUND	/PI	467	(k)	(k)	9	39	(k)	(k)	55	412	09/30/02	01/07/88		(k)
SX-103	SOUND	/PI	491	(l)	(l)	1	134	(l)	(l)	8	483	09/30/02	12/17/87		(l)
SX-104	ASMD LKR	IS/PI	446	0	48	0	231	48	39	136	310	04/30/00	09/08/88	02/04/98	
SX-105	SOUND	IS /PI	376	0	39	0	153	39	35	65	311	04/30/01	06/15/88		(m)
SX-106	SOUND	IS/PI	397	0	37	0	148	37	31	0	397	05/30/00	06/01/89		
SX-107	ASMD LKR	IS/IP	95	0	7	0	0	7	3	79	16	01/01/02	03/06/87		
SX-108	ASMD LKR	IS/IP	73	0	0	0	0	0	0	73	0	01/01/02	03/06/87		
SX-109	ASMD LKR	IS/IP	241	0	0	0	0	0	0	58	183	01/01/02	05/21/86		
SX-110	ASMD LKR	IS/IP	56	0	0	0	0	0	0	29	27	01/01/02	02/20/87		
SX-111	ASMD LKR	IS/IP	115	0	11	0	0	11	7	76	39	01/01/02	06/09/94		
SX-112	ASMD LKR	IS/IP	75	0	6	0	0	6	2	56	19	01/01/02	03/10/87		
SX-113	ASMD LKR	IS/IP	19	0	0	0	0	0	0	19	0	01/01/02	03/18/88		
SX-114	ASMD LKR	IS/IP	157	0	30	0	0	30	26	42	115	01/01/02	02/26/87		
SX-115	ASMD LKR	IS/IP	4	0	0	0	0	0	0	4	0	01/01/02	03/31/88		
15 TANKS - TOTALS:			3425							844	2581				
							T TANK FARM STATUS								
T-101	ASMD LKR	IS/PI	100	0	16	0	25	16	12	37	63	01/01/02	04/07/93		
T-102	SOUND	IS/IP	32	13	3	0	0	16	13	19	0	08/31/84	06/28/89		
T-103	ASMD LKR	IS/IP	27	4	3	0	0	7	4	23	0	11/29/83	07/03/84		
T-104	SOUND	IS/PI	317	0	31	0	150	31	27	317	0	11/30/99	06/29/89	10/07/99	
T-105	SOUND	IS/IP	98	0	5	0	0	5	0	98	0	05/29/87	05/14/87		
T-106	ASMD LKR	IS/IP	22	0	0	0	0	0	0	22	0	01/01/01	06/29/89		
T-107	ASMD LKR	IS/PI	173	0	34	0	11	34	28	173	0	05/31/96	07/12/84	05/09/96	
T-108	ASMD LKR	IS/IP	16	0	4	0	0	4	0	5	11	01/01/01	07/17/84		

TABLE B-1. INVENTORY AND STATUS BY TANK - SINGLE-SHELL TANKS

September 30, 2002

The SST volume estimates were derived from the Best-Basis Inventory baselining task, dated January 1, 2002, and represent the official waste volume estimates for Hanford's waste storage tanks. The interstitial liquid estimates for pumpable liquid remaining (PLR) and drainable interstitial liquid (DIL) were calculated from these volumes using the waste phase drainable porosities per Updated Liquid Volume Estimates (HNF-2978 and RPP 5556). Sludge and Saltcake total volumes include Retained Gas.

				WASTE VOLUMES									PHOTOS/VIDES		
TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
T-109	ASMD LKR	IS/IP	62	0	11	0	0	11	4	0	62	01/01/02	02/25/93		
T-110	SOUND	IS/PI	370	1	48	0	50	48	43	369	0	03/31/02	07/12/84	10/07/99	
T-111	ASMD LKR	IS/PI	447	0	38	0	10	38	35	447	0	01/01/02	04/13/94	02/13/95	
T-112	SOUND	IS/IP	67	7	4	0	0	11	7	60	0	04/28/82	08/01/84		
T-201	SOUND	IS/IP	31	2	4	0	0	6	2	29	0	01/01/02	04/15/86		
T-202	SOUND	IS/IP	21	0	3	0	0	3	0	21	0	07/12/81	07/06/89		
T-203	SOUND	IS/IP	37	0	5	0	0	5	0	37	0	01/01/02	08/03/89		
T-204	SOUND	IS/IP	37	0	5	0	0	5	0	37	0	01/01/02	08/03/89		
16 TANKS - TOTALS			1857							1694	136				

TX TANK FARM STATUS

TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
TX-101	SOUND	IS/IP/CCS	91	0	7	0	0	7	3	74	17	01/01/02	10/24/85		
TX-102	SOUND	IS/IP/CCS	217	0	27	0	94	27	16	2	215	01/01/02	10/31/85		
TX-103	SOUND	IS/IP/CCS	145	0	18	0	68	18	11	0	145	01/01/02	10/31/85		
TX-104	SOUND	IS/IP/CCS	69	3	9	0	4	12	7	34	32	01/01/02	10/16/84		
TX-105	ASMD LKR	IS/IP/CCS	576	0	25	0	122	25	14	8	568	01/01/02	10/24/89		
TX-106	SOUND	IS/IP/CCS	348	0	37	0	135	37	30	5	343	03/31/02	10/31/85		
TX-107	ASMD LKR	IS/IP/CCS	30	0	7	0	0	7	0	0	30	01/01/02	10/31/85		
TX-108	SOUND	IS/IP/CCS	129	0	8	0	14	8	1	6	123	01/01/02	09/12/89		
TX-109	SOUND	IS/IP/CCS	363	0	6	0	72	6	2	363	0	01/01/02	10/24/89		
TX-110	ASMD LKR	IS/IP/CCS	467	0	14	0	115	14	10	37	430	01/01/02	10/24/89		
TX-111	SOUND	IS/IP/CCS	365	0	10	0	98	10	6	43	322	01/01/02	09/12/89		
TX-112	SOUND	IS/IP/CCS	634	0	26	0	94	26	21	0	634	01/01/02	11/19/87		
TX-113	ASMD LKR	IS/IP/CCS	639	0	18	0	19	18	14	93	546	01/01/02	04/11/83	09/23/94	
TX-114	ASMD LKR	IS/IP/CCS	532	0	17	0	104	17	11	4	528	01/01/02	04/11/83	02/17/95	
TX-115	ASMD LKR	IS/IP/CCS	554	0	25	0	99	25	15	8	546	01/01/02	06/15/88		
TX-116	ASMD LKR	IS/IP/CCS	599	2	21	0	24	21	17	66	531	03/31/02	10/17/89		
TX-117	ASMD LKR	IS/IP/CCS	481	0	10	0	54	10	5	29	452	01/01/02	04/11/83		
TX-118	SOUND	IS/IP/CCS	256	0	31	0	89	31	27	0	256	01/01/02	12/19/79		
18 TANKS - TOTALS			6495							772	5718				

TABLE B-1. INVENTORY AND STATUS BY TANK - SINGLE-SHELL TANKS

September 30, 2002

The SST volume estimates were derived from the Best-Basis Inventory baselining task, dated January 1, 2002, and represent the official waste volume estimates for Hanford's waste storage tanks. The interstitial liquid estimates for pumpable liquid remaining (PLR) and drainable interstitial liquid (DIL) were calculated from these volumes using the waste phase drainable porosities per Updated Liquid Volume Estimates (HNF-2978 and RPP-5556).

HNF-2978, Rev. 4, resulted in changes to tanks U-107, U-108, and U-111, effective July 30, 2002.

Sludge and Saltcake total volumes include Retained Gas.

TANK NO.	TANK INTEGRITY	TANK STATUS	TOTAL WASTE (Kgal)	WASTE VOLUMES: SUPER-NATANT LIQUID (Kgal)	DRAINABLE INTERSTITIAL LIQUID (Kgal)	PUMPED THIS MONTH (Kgal)	TOTAL PUMPED (Kgal)	DRAINABLE LIQUID REMAINING (Kgal)	PUMPABLE LIQUID REMAINING (Kgal)	SLUDGE (Kgal)	SALT CAKE (Kgal)	SOLIDS VOLUME UPDATE	PHOTOS/VIDEOS: LAST IN-TANK PHOTO	LAST IN-TANK VIDEO	SEE FOOTNOTES FOR THESE CHANGES
TY TANK FARM STATUS															
TY-101	ASMD LKR	IS/IP/CCS	118	0	2	0	8	2	0	72	46	06/30/99	08/22/89		
TY-102	SOUND	IS/IP/CCS	69	0	13	0	7	13	6	0	69	01/01/02	07/07/87		
TY-103	ASMD LKR	IS/IP/CCS	155	0	23	0	12	23	19	103	52	01/01/02	08/22/89		
TY-104	ASMD LKR	IS/IP/CCS	44	1	4	0	0	5	1	43	0	03/31/02	11/03/87		
TY-105	ASMD LKR	IS/IP/CCS	231	0	12	0	4	12	10	231	0	04/28/82	09/07/89		
TY-106	ASMD LKR	IS/IP/CCS	16	0	1	0	0	1	0	16	0	01/01/02	08/22/89		
6 TANKS - TOTALS			633							465	167				
U TANK FARM STATUS															
U-101	ASMD LKR	IS/IP	24	0	4	0	0	4	0	24	0	01/01/02	06/19/79		
U-102	SOUND	IS /PI	327	1		0	87			34	293	06/31/02	06/08/89		
U-103	SOUND	IS/PI	418	1	33	0	99	34	28	13	405	01/30/00	09/13/88		
U-104	ASMD LKR	IS/IP	122	0	0	0	0	0	0	122	0	01/01/02	08/10/89		
U-105	SOUND	IS/PI	353	0	44	0	88	44	40	32	321	03/30/01	07/07/88		
U-106	SOUND	IS/PI	172	2	36	0	39	38	31	0	170	03/30/01	07/07/88		
U-107	SOUND	/PI	320	(n)	(n)	5	91	(n)	(n)	15	305	09/30/02	10/27/88		(n)
U-108	SOUND	/PI	435	(o)	(o)	10	33	(o)	(o)	29	406	09/30/02	09/12/84		(o)
U-109	SOUND	IS/PI	401			0	78			35	366	04/30/02	07/07/88		
U-110	ASMD LKR	IS/PI	176	0	16	0	0	16	1	176	0	01/01/02	12/11/84		
U-111	SOUND	/PI	272	(p)	(p)	17	67	(p)	(p)	26	246	09/30/02	06/23/88		(p)
U-112	ASMD LKR	IS/IP	45	0	4	0	0	4	0	45	0	02/10/84	08/03/89		
U-201	SOUND	IS/IP	5	1	1	0	0	2	1	4	0	08/15/79	08/08/89		
U-202	SOUND	IS/IP	4	1	0	0	0	1	1	3	0	01/01/02	08/08/89		
U-203	SOUND	IS/IP	4	1	0	0	0	1	1	3	0	01/01/02	06/13/89		
U-204	SOUND	IS/IP	4	1	0	0	0	1	1	3	0	01/01/02	06/13/89		
16 TANKS - TOTALS			3082							564	2512				
GRAND TOTAL			31732							9798	21730				

Notes: (1) The total waste volume includes a volume of retained gas that was calculated from tank measurements. Seven tanks are affected: A-101, AX-101, S-102, S-111, SX-105, U-103, and U-109.

(2) +/- 1 Kgal difference in volumes is due to rounding

TABLE B-1. INVENTORY AND STATUS BY TANK – SINGLE-SHELL TANKS

September 30, 2002

Footnotes:

Stabilization information is from WHC-SD-RE-TI-178, "SST Stabilization Record," latest revision, or from the SST Stabilization Project, or the System Engineer.

Initial estimated Pumpable Liquid volumes (below) are based on HNF-2978, Rev. 2, "Updated Pumpable Liquid Volume Estimates and Jet Pump Operations for Interim Stabilization of Remaining Single-Shell Tanks," dated August 2000. A revision to this document is planned for issuance in June 2002.

Best Basis Inventory (BBI) rebaselining and/or quarterly update review resulted in changes to the following tanks effective March 31, 2002: BY-106, BY-112, S-104, SX-102, T-110, TX-106, TX-116, and TY-104.

HNF-2978, Rev. 4, resulted in changes to the following tanks, effective June 30, 2002: A-101, AX-101, BY-105, BY-106, C-103, S-101, S-102, S-107, S-111, S-112, SX-101, SX-102, SX-103, U-107, U-108, and U-111.

(a) A-101 Initial estimated Pumpable Liquid volume: 610 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began on May 6, 2000. No pumping occurred from July 12, 2000, until January 17, 2002, when pumping resumed. Pumping was shut down March 27, 2002, due to high transfer line pressure; pumping resumed April 20, 2002.

Volumes reported in May 2002 and subsequent months reflect an error associated with the readings from the flowmeter (approximately a 1% deviation - the flowmeter is reading high). The final amount of waste transferred at the end of saltwell pumping will be adjusted to correct for this error; until then the volumes reported will be the actual volumes on the procedure data sheets.

Final volumes will be determined at completion of Interim Stabilization.

(b) AX-101 Initial estimated Pumpable Liquid volume: 365 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began July 29, 2000, shut down on August 11, 2000, and resumed March 22, 2001. Pumping was shut down April 3, 2001, due to failure of the transfer line. Pumping resumed February 1, 2002, and was shut down again March 28, 2002, due to alarm #40 Power Monitor. Pumping was resumed April 9, 2002. **Pumping was shut down on September 10, 2002.**

Volumes reported in May 2002 and subsequent months reflect an error associated with the readings from the flowmeter (approximately a 1% deviation - the flowmeter was reading high). The final amount of waste transferred at the end of saltwell pumping will be adjusted to correct for this error; until then the volumes reported will be the actual volumes on the procedure data sheets.

Final volumes will be determined at completion of Interim Stabilization.

(c) BY-105 Initial estimated Pumpable Liquid volume: 94 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began July 11, 2001. Pumping was shut down August 11, 2001, due to transfer line leak detectors not meeting all operability requirements of the TSR. Compensatory actions were established to allow resumption of pumping. Additionally, field work for Project W-314, "Tank Farm Upgrades," took the primary transfer route out of service. No pumping occurred from August to November 2001 when pumping resumed. No pumping occurred between December 2001 and August 2002; DCRT waste had to be transferred to tank AP-102 before pumping could resume. Pumping was restarted and shut down several times during August 2002. Pumping was shut down on August 30, 2002, because the DCRT was full: awaiting BX-244 transfer to AP-102. **Pumping was restarted on September 1, 2002, and shut down on September 13, 200. Troubleshooting indicates two possible problems: (1) a plugged backflow preventer downstream of the injection pump or (2) the thrust bearings in the transfer pump are worn out.**

As of September 13, 2002, this tank is currently under evaluation for meeting Interim Stabilization criteria.

Final volumes will be determined at completion of Interim Stabilization

(d) BY-106 Initial estimated Pumpable Liquid volume: 103 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping was originally started August 10, 1995, and shut down October 17, 1995, due to an Unreviewed Safety Question (USQ) for flammable gas concerns.

Pumping was restarted July 11, 2001. Pumping was shut down August 11, 2001, due to transfer line leak detectors not meeting all operability requirements of the TSR. Compensatory actions were established to allow resumption of pumping. Additionally, field work for Project W-314, "Tank Farm Upgrades," took the primary transfer route out of service. Pumping resumed November 13, 2001. No pumping occurred between December 2001 and August 2002; DCRT waste had to be transferred to tank AP-102 before pumping could resume. Pumping was restarted, shut down, and restarted several times during August 2002. Pumping was shut down on August 30, 2002, because the DCRT was full: awaiting BX-244 transfer to AP-102. **Pumping was restarted on September 1, 2002, and is now in bypass mode because the saltwell will not run in automatic mode. This is being evaluated by Interim Stabilization engineering. The Specific Gravity leg is plugged.**

Final volumes will be determined at completion of Interim Stabilization

(e) S-101 Initial estimated Pumpable Liquid volume: 77 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began July 27, 2002. Pumping was shut down and restarted several times in August 2002; pumping was shut down on August 7, 2002. Pumping remains shut down in support of S-107 field work.

Final volumes will be determined at completion of Interim Stabilization.

(f) S-102 Initial estimated Pumpable Liquid volume: 156 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began March 18, 1999. Many pumping problems occurred over the following months, and the pump was replaced several times. Pumping was interrupted again in June 2000. No pumping occurred until May 10, 2002, when pumping resumed. The pump was manually shut down May 18, 2002. A Lock and Tag was hung to support Saltwell Tie-in work scheduled. Pumping resumed June 30, 2002.

Final volumes will be determined at completion of Interim Stabilization

(g) S-107 Initial estimated Pumpable Liquid volume: 60 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began on September 4, 2002.

(h) S-111 Initial estimated Pumpable Liquid volume: 147 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began December 18, 2001. (Additionally, 3 Kgal were pumped in October 1975) Pumping was shut down on July 10, 2002, and remains down for replacement of a flow totalizer.

Final volumes will be determined at completion of Interim Stabilization.

(i) S-112 Initial estimated Pumpable Liquid volume: 67 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping resumed on September 21, 2002. (Initial saltwell pumping took place in August 1978, with a total of 125 Kgal being pumped at that time.)

(j) SX-101 Initial estimated Pumpable Liquid volume: 80 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began November 22, 2000. No pumping has occurred since December 2000 due to failure of the pump. Pumping resumed September 21, 2001, following replacement of the saltwell pump and the lower piping. No pumping has occurred since November 2001. Attempts were made to restart pumping in July 2002; pumping remains down because jet/foot valve assembly is plugged.

Final volumes will be determined at completion of Interim Stabilization.

(k) SX-102 Initial estimated Pumpable Liquid volume: 106 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began December 15, 2001. Pumping was shut down on August 14, 2002, in support of S-107 field work. **Pumping was briefly restarted on September 1, 2002, in bypass mode. Pumping was shut down on September 2, 2002, due to waste discharge temperature being too high. Pumping was restarted on September 25, 2002, in bypass mode.**

Final volumes will be determined at completion of Interim Stabilization.

(l) SX-103 Initial estimated Pumpable Liquid volume: 175 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began October 26, 2000. Pumping was shut down April 22, 2001, due to leak detector and subsequent shielding problems in the pump pit. Pumping resumed September 14, 2001. Pumping was shut down on August 14, 2002, in support of S-107 field work. **Pumping was restarted September 1, 2002, and shut down on September 17, 2002, per engineering instructions.**

As of September 17, 2002, this tank is currently under evaluation for meeting Interim Stabilization criteria.

Final volumes will be determined at completion of Interim Stabilization

(m) SX-105 Initial estimated Pumpable Liquid volume: 141 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began in this tank on August 8, 2000, and was completed on April 25, 2002.

This tank was declared Interim Stabilized on August 1, 2002; the declaration letter to DOE was issued on August 20, 2002.

Total Waste: 376.0 Kgal; Supernatant: zero; Drainable Interstitial Liquid: 38.5 Kgal; Drainable Liquid Remaining: 38.5 Kgal; Pumpable Liquid Remaining: 34.5 Kgal; Sludge: 65.0 Kgal; Saltcake: 152.6 Kgal; Total Pumped: 152.6 Kgal.

(n) U-107 Initial estimated Pumpable Liquid volume: 115 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began September 29, 2001. **Pumping was shut down on September 11, 2002. Restart attempts have failed; the problem appears to be that the pump has failed; it is expected to be replaced in October 2002.**

Final volumes will be determined at completion of Interim Stabilization

(o) U-108 Initial estimated Pumpable Liquid volume: 120 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began December 2, 2001. No pumping occurred in April 2002; pumping remains down due to a partially plugged transfer line. Pumping was restarted briefly on May 18, 2002. The pump shut down several times due to alarming and was restarted in bypass mode. From May 18 to May 31, 2002, various Trouble Alarms were intermittently activated. During June 2002, this pump was restarted and shut down several times. As of June 30, 2002, it was still shut down due to transfer line restrictions. Pumping resumed in July 2002. **Pumping was shut down on September 30, 2002, for planned SY exhauster outage.**

Final volumes will be determined at completion of Interim Stabilization.

(p) U-111 Initial estimated Pumpable Liquid volume: 77 Kgal (HNF-2978, Rev. 4, effective June 30, 2002)

Pumping began on June 14, 2002.

Final volumes will be determined at completion of Interim Stabilization.

TABLE B-2. SINGLE-SHELL TANKS STABILIZATION STATUS SUMMARY

September 30, 2002

Partial Interim Isolated (PI)

EAST AREA

A-101
A-102

AX-101

BY-102
BY-103
BY-105
BY-106
BY-109

C-103
C-105
C-106

East Area	11

WEST AREA

S-101
S-102
S-103
S-106
S-107
S-108
S-109
S-110
S-111
S-112

SX-101
SX-102
SX-103
SX-104
SX-105
SX-106

T-101
T-104
T-107
T-110
T-111

U-102
U-103
U-105
U-106
U-107
U-108
U-109
U-110
U-111

West Area	29
Total	40

Intrusion Prevention Completed (IP)

EAST AREA

A-103
A-104
A-105
A-106

AX-102
AX-103
AX-104

B-FARM - 16 tanks
BX-FARM - 12 tanks

BY-101
BY-104
BY-107
BY-108
BY-110
BY-111
BY-112

C-101
C-102
C-104
C-107
C-108
C-109
C-110
C-111
C-112
C-201
C-202
C-203
C-204

East Area	55

WEST AREA

S-104
S-105

SX-107
SX-108
SX-109
SX-110
SX-111
SX-112
SX-113
SX-114
SX-115

T-102
T-103
T-105
T-106
T-108
T-109
T-112
T-201
T-202
T-203
T-204

TX-FARM - 18 tanks
TY-FARM - 6 tanks

U-101
U-104
U-112
U-201
U-202
U-203
U-204

West Area	53
Total	108

Interim Stabilized (IS)

EAST AREA

A-102
A-103
A-104
A-105
A-106

AX-102
AX-103
AX-104

B-FARM - 16 tanks
BX-FARM - 12 tanks

BY-101
BY-102
BY-103
BY-104
BY-107
BY-108
BY-109
BY-110
BY-111
BY-112

C-101
C-102
C-104
C-105
C-107
C-108
C-109
C-110
C-111
C-112
C-201
C-202
C-203
C-204

East Area	60

WEST AREA

S-103
S-104
S-105
S-106
S-108
S-109
S-110

SX-104
SX-105
SX-106
SX-107
SX-108
SX-109
SX-110
SX-111
SX-112
SX-113
SX-114
SX-115

T-Farm - 16 tanks
TX-Farm - 18 tanks
TY-Farm - 6 tanks

U-101
U-102
U-103
U-104
U-105
U-106
U-109
U-110
U-112
U-201
U-202
U-203
U-204

West Area	72
Total	132

TABLE B-3. SINGLE-SHELL TANKS INTERIM STABILIZATION STATUS

September 30, 2002

Tank Number	Tank Integrity	Interim Stabil. Date (1)	Stabil. Method	Tank Number	Tank Integrity	Interim Stabil. Date (1)	Stabil. Method	Tank Number	Tank Integrity	Interim Stabil. Date (1)	Stabil. Method
A-101	SOUND	N/A		C-101	ASMD LKR	11/83	AR	T-108	ASMD LKR	11/78	AR
A-102	SOUND	08/89	SN	C-102	SOUND	09/95	JET(2)	T-109	ASMD LKR	12/84	AR
A-103	ASMD LKR	06/88	AR	C-103	SOUND	N/A		T-110	SOUND	01/00	JET(5)
A-104	ASMD LKR	09/78	AR(3)	C-104	SOUND	09/89	SN	T-111	ASMD LKR	02/95	JET
A-105	ASMD LKR	07/79	AR	C-105	SOUND	10/95	AR	T-112	SOUND	03/81	AR(2)(3)
A-106	SOUND	08/82	AR	C-106	SOUND	N/A		T-201	SOUND	04/81	AR (3)
AX-101	SOUND	N/A		C-107	SOUND	09/95	JET	T-202	SOUND	08/81	AR
AX-102	ASMD LKR	09/88	SN	C-108	SOUND	03/84	AR	T-203	SOUND	04/81	AR
AX-103	SOUND	08/87	AR	C-109	SOUND	11/83	AR	T-204	SOUND	08/81	AR
AX-104	ASMD LKR	08/81	AR	C-110	ASMD LKR	05/95	JET	TX-101	SOUND	02/84	AR
B-101	ASMD IKR	03/81	SN	C-111	ASMD LKR	03/84	SN	TX-102	SOUND	04/83	JET
B-102	SOUND	08/85	SN	C-112	SOUND	09/90	AR	TX-103	SOUND	08/83	JET
B-103	ASMD IKR	02/85	SN	C-201	ASMD LKR	03/82	AR	TX-104	SOUND	09/79	SN
B-104	SOUND	06/85	SN	C-202	ASMD LKR	08/81	AR	TX-105	ASMD LKR	04/83	JET
B-105	ASMD IKR	12/84	AR	C-203	ASMD LKR	03/82	AR	TX-106	SOUND	06/83	JET
B-106	SOUND	03/85	SN	C-204	ASMD LKR	09/82	AR	TX-107	ASMD LKR	10/79	AR
B-107	ASMD LKR	03/85	SN	S-101	SOUND	N/A		TX-108	SOUND	03/83	JET
B-108	SOUND	05/85	SN	S-102	SOUND	N/A		TX-109	SOUND	04/83	JET
B-109	SOUND	04/85	SN	S-103	SOUND	04/00	JET (6)	TX-110	ASMD LKR	04/83	JET
B-110	ASMD LKR	12/84	AR	S-104	ASMD LKR	12/84	AR	TX-111	SOUND	04/83	JET
B-111	ASMD LKR	06/85	SN	S-105	SOUND	09/88	JET	TX-112	SOUND	04/83	JET
B-112	ASMD LKR	05/85	SN	S-106	SOUND	02/01	JET (10)	TX-113	ASMD LKR	04/83	JET
B-201	ASMD LKR	08/81	AR (3)	S-107	SOUND	N/A		TX-114	ASMD LKR	04/83	JET
B-202	SOUND	05/85	AR(2)	S-108	SOUND	12/96	JET	TX-115	ASMD LKR	09/83	JET
B-203	ASMD LKR	06/84	AR	S-109	SOUND	06/01	JET (13)	TX-116	ASMD LKR	04/83	JET
B-204	ASMD LKR	06/84	AR	S-110	SOUND	01/97	JET	TX-117	ASMD LKR	03/83	JET
BX-101	ASMD LKR	09/78	AR(3)	S-111	SOUND	N/A		TX-118	SOUND	04/83	JET
BX-102	ASMD LKR	11/78	AR	S-112	SOUND	N/A		TY-101	ASMD LKR	04/83	JET
BX-103	SOUND	11/83	AR(2)(3)	SX-101	SOUND	N/A		TY-102	SOUND	09/79	AR
BX-104	SOUND	09/89	SN	SX-102	SOUND	N/A		TY-103	ASMD LKR	02/83	JET
BX-105	SOUND	03/81	SN	SX-103	SOUND	N/A		TY-104	ASMD LKR	11/83	AR
BX-106	SOUND	07/95	SN	SX-104	ASMD LKR	04/00	JET (7)	TY-105	ASMD LKR	02/83	JET
BX-107	SOUND	09/90	JET	SX-105	SOUND	08/02	JET (16)	TY-106	ASMD LKR	11/78	AR
BX-108	ASMD LKR	07/79	SN	SX-106	SOUND	05/00	JET (8)	U-101	ASMD LKR	09/79	AR
BX-109	SOUND	08/90	JET	SX-107	ASMD LKR	10/79	AR	U-102	SOUND	06/02	JET (15)
BX-110	ASMD LKR	08/85	SN	SX-108	ASMD LKR	08/79	AR	U-103	SOUND	09/00	JET (9)
BX-111	ASMD LKR	03/95	JET	SX-109	ASMD LKR	05/81	AR	U-104	ASMD LKR	10/78	AR
BX-112	SOUND	09/90	JET	SX-110	ASMD LKR	08/79	AR	U-105	SOUND	03/01	JET (11)
BY-101	SOUND	05/84	JET	SX-111	ASMD LKR	07/79	SN	U-106	SOUND	03/01	JET (12)
BY-102	SOUND	04/95	JET	SX-112	ASMD LKR	07/79	AR	U-107	SOUND	N/A	
BY-103	ASMD LKR	11/97	JET(2)	SX-113	ASMD LKR	11/78	AR	U-108	SOUND	N/A	
BY-104	SOUND	01/85	JET	SX-114	ASMD LKR	07/79	AR	U-109	SOUND	04/02	JET (14)
BY-105	ASMD LKR	N/A		SX-115	ASMD LKR	09/78	AR(3)	U-110	ASMD LKR	12/84	AR
BY-106	ASMD LKR	N/A		T-101	ASMD LKR	04/93	SN	U-111	SOUND	N/A	
BY-107	ASMD LKR	07/79	JET	T-102	SOUND	03/81	AR(2)(3)	U-112	ASMD LKR	09/79	AR
BY-108	ASMD LKR	02/85	JET	T-103	ASMD LKR	11/83	AR	U-201	SOUND	08/79	AR
BY-109	SOUND	07/97	JET	T-104	SOUND	11/99	JET(4)	U-202	SOUND	08/79	SN
BY-110	SOUND	01/85	JET	T-105	SOUND	06/87	AR	U-203	SOUND	08/79	AR
BY-111	SOUND	01/85	JET	T-106	ASMD LKR	08/81	AR	U-204	SOUND	08/79	SN
BY-112	SOUND	06/84	JET	T-107	ASMD LKR	05/96	JET				

LEGEND:

AR = Administratively interim stabilized
JET = Saltwell jet pumped to remove drainable interstitial liquid
SN = Supernatant pumped (Non-Jet pumped)
N/A = Not yet interim stabilized
ASMD LKR = Assumed Leaker

Interim Stabilized Tanks	132
Not Yet Interim Stabilized	17
Total Single-Shell Tanks	149

TABLE B-3. SINGLE-SHELL TANKS INTERIM STABILIZATION STATUS

Footnotes: (in chronological order)

(1) These dates indicate when the tanks were actually interim stabilized. In some cases, the official interim stabilization documents were issued at a later date.

(2) Although tanks BX-103, T-102, and T-112 met the interim stabilization administrative procedure at the time they were stabilized, they no longer meet the recently updated administrative procedure. The tanks were re-evaluated in 1996 and letter 9654456, J. H. Wicks to J. K. McClusky, DOE-RL, dated September 30, 1996, was issued which recommended that no further pumping be performed on these tanks, based on an economic evaluation.

Document RPP-5556, Rev. 0, "Updated Drainable Interstitial Liquid Volume Estimates for 119 Single-Shell Tanks Declared Stabilized," J. G. Field, February 7, 2000, states that five tanks no longer meet the stabilization criteria (BX-103, T-102, and T-112 exceed the supernatant criteria, and BY-103 and C-102 exceed the Drainable Interstitial Liquid [DIL]criteria).

An intrusion investigation was completed on tank B-202 in 1996 because of a detected increase in surface level. As a result of this investigation, it was determined that this tank no longer meets the recently updated administrative procedure for 200 series tanks.

(3) Earlier versions of HNF-SD-RE-TI-178, "SST Stabilization Record," indicated that original Interim Stabilization data are missing on four tanks: B-201, T-102, T-112, and T-201. HNF-SD-RE-TI-178, Rev. 7, dated February 9, 2001, added three additional tanks to those missing stabilization data: A-104, BX-101, and SX-115.

(4) Tank T-104 was declared Interim Stabilized on November 19, 1999. In-tank video taken October 7, 1999, shows the surface is clearly sludge-type waste with no saltcake present. There is no visible supernatant on the surface. Waste surface appears level across tank with numerous cracks. There is a minimal collapsed area around the saltwell screen, with no visible bottom.

(5) Tank T-110 was declared Interim Stabilized on January 5, 2000, after a major equipment failure. An in-tank video taken October 7, 1999 (pumping was discontinued on August 12, 1999), showed the surface of this tank as smooth, brown-tinted sludge with visible cracks.

(6) Tank S-103 was declared Interim Stabilized on April 18, 2000. The surface is a rough, black and brown-colored waste with yellow patches of saltcake visible throughout. The surface appears to be damp, but not saturated, and shows irregular cracking typically seen with surfaces beginning to dry out. A pool of supernatant (10 feet in diameter, 5 feet deep, 1.0 Kgallons) is visible from video observations.

(7) Tank SX-104 was declared Interim Stabilized on April 26, 2000, after a major equipment failure. The surface is a rough, yellowish gray saltcake waste with an irregular surface of visible cracks and shelves that were created as the surface dried out. The waste surface appears to be dry and shows no standing liquid within the tank.

(8) Tank SX-106 was declared Interim Stabilized on May 5, 2000. The surface is a smooth, white-colored saltcake waste. The surface level slopes slightly from the tank sidewall down to a large depression in the center of the tank. A second depression surrounds both saltwell screens and an abandoned Liquid Observation Well (LOW). The waste surfaces appear dry and show no standing liquid within the tank.

(9) Tank U-103 was declared Interim Stabilized on September 11, 2000. The surface is a brown colored waste with irregular patches of white salt crystal. Approximately 30% of the waste surface is covered by the salt formations. The surface level slopes slightly from the tank sidewall down to the first of two depressions in the center of the tank. The waste surface appears dry and shows signs of drying and cracking due to saltwell pumping. LOW readings indicate an average adjusted ILL of 60.2 inches. There is a small pool of supernatant estimated to be 500 gallons.

(10) Tank S-106 was declared Interim Stabilized on February 1, 2001. The surface is a rough, brown and yellow-colored saltcake waste with an irregular surface of mounds and saltcake crystals that were created as the surface was dried out. The waste surface appears to be dry and shows no standing liquid within the tank. There is no evidence of supernatant from video observations. The waste surface slopes gradually from the tank sidewall to the depression in the center of the tank. The depression surrounds both of the saltwell screens, but does not extend around the temperature probe and ENRAF devices.

(11) Tank U-105 was declared Interim Stabilized on March 29, 2001, after a major equipment failure. The surface is a brown colored waste with irregular patches of white salt crystal. Approximately 15% of the surface is covered by the salt formations. The surface level slopes to the first of two depressions in the center of the tank; the first depression is cone shaped and estimated to be 22 feet in diameter. The second depression, inside the first, is cylindrically shaped and has a diameter of approximately 10 feet. Both depressions are centered on the saltwell screen. The waste surface appears dry and shows signs of cracking due to saltwell pumping. There is no visible liquid in the tank.

(12) Tank U-106 was declared Interim Stabilized on March 9, 2001. The surface is a dark brown/yellow colored waste that is covered with many stalagmite-type crystals growing on the surface. The crystals cover approximately 75% of the waste surface. The waste surface is irregular, appears dry, and shows only minimal signs of cracking due to saltwell pumping. The supernatant pool is estimated to be 13.3 feet in diameter based on the visible portion of the saltwell screen. The pool is centered on the saltwell screen.

(13) Tank S-109 was declared Interim Stabilized on June 11, 2001. The surface is primarily a white colored salt crystal with small patches of dark salt visible due to saltwell/sampling activities. Approximately 95% of the waste surface is covered by the salt formations. The surface level slopes slightly from the tank sidewall down to a depression in the center of the tank. The waste surface appears rough and dry and shows signs of cracking and slumping due to saltwell pumping.

(14) Tank U-109 was declared Interim Stabilized on April 5, 2002. The declaration letter to DOE was issued on June 20, 2002. The surface is primarily a brown colored waste with irregular patches of white salt crystal. Approximately 70% of the waste surface is covered by the salt formations. The surface level slopes slightly from the tank sidewall down to a depression in the center of the tank. The depression is cone shaped and is centered on the saltwell screen. The waste surface appears dry and shows signs of cracking due to saltwell pumping. There is no visible liquid within the tank.

(15) Tank U-102 was declared Interim Stabilized on June 19, 2002. The declaration letter to DOE was issued June 28, 2002. The surface is primarily a gray-brown colored cracked waste with irregular patches of white salt crystal. Approximately 50% of the waste surface is covered by the salt formations. The surface level slopes slightly from the tank sidewall down to a depression in the center of the tank. The depression is cone shaped and is centered on the saltwell screen. The waste surface appears dry and shows signs of cracking due to saltwell pumping. There is approximately a 5-foot wide pool of visible liquid within the saltwell screen depression.

(16) Tank SX-105 was declared Interim Stabilized on August 1, 2002; the declaration letter to DOE was issued August 20, 2002. The surface is a rough, yellowish-gray saltcake waste with an irregular surface of visible cracks and shelves due to saltwell pumping. The waste surface appears to be dry and shows no standing water within the tank. The waste surface slopes gradually from the tank sidewall to the center of the tank. There are no large depressions in or around the center of the tank.

TABLE B-4. SINGLE-SHELL TANK INTERIM STABILIZATION MILESTONES

September 30, 2002

New single-shell tank interim stabilization milestones were negotiated in 1999 and are identified in the "Consent Decree." The Consent Decree was approved on August 16, 1999.

CONSENT DECREE
Attachments A-1 and A-2

The following table is the schedule for pumping liquid waste from the remaining twenty-nine (29) single-shell tanks. This schedule is enforceable pursuant to the terms of the Decree except for the "Projected Pumping Completion Dates," which are estimates only and not enforceable. Also, this schedule does not include tank C-106.

Tank Designation	Project Pumping Start Date	Actual Pumping Start Date	Projected Pumping Completion Date	Interim Stabilization Date
1. T-104	Already initiated	March 24, 1996	May 30, 1999	November 19, 1999
2. T-110	Already initiated	May 12, 1997	May 30, 1999	January 5, 2000
3. SX-104	Already initiated	September 26, 1997	December 30, 2000	April 26, 2000
4. SX-106	Already initiated	October 6, 1998	December 30, 2000	May 5, 2000
5. S-102	Already initiated	March 18, 1999	March 30, 2001	
6. S-106	Already initiated	April 16, 1999	March 30, 2001	February 1, 2001
7. S-103	Already initiated	June 4, 1999	March 30, 2001	April 18, 2000
8. U-103 *	June 15, 2000	September 26, 1999	April 15, 2002	September 11, 2000
9. U-105 *	June 15, 2000	December 10, 1999	April 15, 2002	March 29, 2001
10. U-102 *	June 15, 2000	January 20, 2000	April 15, 2002	June 19, 2002
11. U-109 *	June 15, 2000	March 11, 2000	April 15, 2002	April 5, 2002
12. A-101	October 30, 2000	May 6, 2000	September 30, 2003	
13. AX-101	October 30, 2000	July 29, 2000	September 30, 2003	
14. SX-105	March 15, 2001	August 8, 2000	February 28, 2003	August 1, 2002
15. SX-103	March 15, 2001	October 26, 2000	February 28, 2003	
16. SX-101	March 15, 2001	November 22, 2000	February 28, 2003	
17. U-106 *	March 15, 2001	August 24, 2000	February 28, 2003	March 9, 2001
18. BY-106	July 15, 2001	July 11, 2001	June 30, 2003	
19. BY-105	July 15, 2001	July 11, 2001	June 30, 2003	
20. U-108	December 30, 2001	December 2, 2001	August 30, 2003	
21. U-107	December 30, 2001	September 29, 2001	August 30, 2003	
22. S-111	December 30, 2001	December 18, 2001	August 30, 2003	
23. SX-102	December 30, 2001	December 15, 2001	August 30, 2003	
24. U-111	November 30, 2002	June 14, 2002	September 30, 2003	
25. S-109	November 30, 2002	September 23, 2000	September 30, 2003	June 11, 2001
26. S-112	November 30, 2002		September 30, 2003	
27. S-101	November 30, 2002	July 27, 2002	September 30, 2003	
28. S-107	November 30, 2002		September 30, 2003	
29. C-103	The Decree states that no later than December 30, 2000, DOE will determine whether the organic layer and pumpable liquids will be pumped from this tank together or separately, and will establish a deadline for initiating pumping of this tank; the parties will incorporate the initiation deadline into this schedule as provided in Section VI of the Decree. This action is complete: ORP issued a letter to WDOE on December 22, 2000, meeting the requirements of this milestone.			

* Tanks containing organic complexants.

Completion of Interim Stabilization. DOE will complete interim stabilization of all 29 single-shell tanks listed above by September 30, 2004.

Percentage of Pumpable Liquid Remaining to be Removed:

93% of Total Liquid	9/30/1999 (1)
38% of Organic Complexed Pumpable Liquids	9/30/2000 (2)
5% of Organic Complexed Pumpable Liquids	9/30/2001 (3)
18% of Total Liquid	9/30/2002 (4)
2% of Total Liquid	9/30/2003

The "percentage of pumpable liquid remaining to be removed" is calculated by dividing the volume of pumpable liquid remaining to be removed from tanks not yet interim stabilized by the sum of the total amount of liquid that has been pumped and the pumpable liquid that remains to be pumped from all tanks.

(1) The Pumpable Liquid Remaining was reduced to 88% by September 30, 1999. Reference LMHC-9957926 R1, D. I. Allen, LHMC, to D. C. Bryson, DOE-ORP, dated October 26, 1999.

(2) The Complexed Pumpable Liquid Remaining was reduced to 38% by September 15, 2000. Reference CHG-0004752, R. F. Wood, CHG, to J. J. Short, DOE-ORP, dated September 13, 2000.

(3) Reference CHG-0104859, R. F. Wood, CHG, to J. S. O'Connor, DOE-ORP, dated September 20, 2001: this reference states that tanks U-102 and U-109 appear to have met the interim stabilization criteria, thereby reducing the Complexed Pumpable Liquid Remaining to zero. Reference CHG-0202630, dated June 20, 2002, declared tank U-109 Interim Stabilized and confirmed the completion of Consent Decree milestone, Attachment A, Item 11, as well as the partial completion of milestone D-001-004-T01. Reference CHG-0202901, dated June 28, declared tank U-102 Interim Stabilized and confirmed the completion of Consent Decree milestone, Attachment A, Item 10, as well as the partial completion of milestone D-001-004-T01.

(4) Reference CHG-0204571, J. C. Fulton, CHG, to J. E. Rasmussen, DOE-ORP, dated September 26, 2002: this reference states that Consent Decree Milestone D-001-12V "The Percentage of Pumpable Liquid Remaining to be Removed Will be Equal To or Less Than 18% of Total Liquid," will be completed by September 30, 2002. Reference CHG-204636, R. F. Wood, CHG, to J. S. O'Connor, DOE-ORP, dated September 30, 2002: this reference states that the milestone was met on September 28, 2002. The percentage of pumpable liquid remaining was 17.94% or less than 550 Kgallons.

TABLE B-5. SINGLE-SHELL TANK LEAK VOLUME ESTIMATES (Sheet 1 of 6)

September 30, 2002

Tank Number		Date Declared Confirmed or Assumed Leaker (3)	Volume Gallons (2)	Associated KiloCuries 137 Cs (9)	Interim Stabilized Date (11)	Leak Estimate Updated	Leak Estimate Reference
241-A-103		1987	5500 (8)		06/88	1987	(j)
241-A-104		1975	500 to 2500	0.8 to 1.8 (q)	09/78	1983	(a)(q)
241-A-105	(1)	1963	10000 to 277000	85 to 760 (b)	07/79	1991	(b)(c)
241-AX-102		1988	3000 (8)		09/88	1989	(h)
241-AX-104		1977	-- (6)		08/81	1989	(g)
241-B-101		1974	-- (6)		03/81	1989	(g)
241-B-103		1978	-- (6)		02/85	1989	(g)
241-B-105		1978	-- (6)		12/84	1989	(g)
241-B-107		1980	8000 (8)		03/85	1986	(d)(f)
241-B-110		1981	10000 (8)		03/85	1986	(d)
241-B-111		1978	-- (6)		06/85	1989	(g)
241-B-112		1978	2000		05/85	1989	(g)
241-B-201		1980	1200 (8)		08/81	1984	(e)(f)
241-B-203		1983	300 (8)		06/84	1986	(d)
241-B-204		1984	400 (8)		06/84	1989	(g)
241-BX-101		1972	-- (6)		09/78	1989	(g)
241-BX-102		1971	70000	50 (l)	11/78	1986	(d)
241-BX-108		1974	2500	0.5 (l)	07/79	1986	(d)
241-BX-110		1976	-- (6)		08/85	1989	(g)
241-BX-111		1984 (13)	-- (6)		03/95	1993	(g)
241-BY-103		1973	<5000		11/97	1983	(a)
241-BY-105		1984	-- (6)		N/A	1989	(g)
241-BY-106		1984	-- (6)		N/A	1989	(g)
241-BY-107		1984	15100 (8)		07/79	1989	(g)
241-BY-108		1972	<5000		02/85	1983	(a)
241-C-101		1980	20000 (8)(10)		11/83	1986	(d)
241-C-110		1984	2000		05/95	1989	(g)
241-C-111		1968	5500 (8)		03/84	1989	(g)
241-C-201	(4)	1988	550		03/82	1987	(i)
241-C-202	(4)	1988	450		08/81	1987	(i)
241-C-203		1984	400 (8)		03/82	1986	(d)
241-C-204	(4)	1988	350		09/82	1987	(i)
241-S-104		1968	24000 (8)		12/84	1989	(g)
241-SX-104		1988	6000 (8)		04/00	1988	(k)
241-SX-107		1964	<5000		10/79	1983	(a)
241-SX-108	(5)(14)	1962	2400 to 35000	17 to 140 (m)(q)(t)	08/79	1991	(m)(q)(t)
241-SX-109	(5)(14)	1965	<10000	<40 (n)(t)	05/81	1992	(n)(t)
241-SX-110		1976	5500 (8)		08/79	1989	(g)
241-SX-111	(14)	1974	500 to 2000	0.6 to 2.4 (l)(q)(t)	07/79	1986	(d)(q)(t)
241-SX-112	(14)	1969	30000	40 (l)(t)	07/79	1986	(d)(t)
241-SX-113		1962	15000	8 (l)	11/78	1986	(d)
241-SX-114		1972	-- (6)		07/79	1989	(g)
241-SX-115		1965	50000	21 (o)	09/78	1992	(o)
241-T-101		1992	7500 (8)		04/93	1992	(p)
241-T-103		1974	<1000 (8)		11/83	1989	(g)
241-T-106		1973	115000 (8)	40 (l)	08/81	1986	(d)
241-T-107		1984	-- (6)		05/96	1989	(g)
241-T-108		1974	<1000 (8)		11/78	1980	(f)
241-T-109		1974	<1000 (8)		12/84	1989	(g)
241-T-111		1979, 1994 (12)	<1000 (8)		02/95	1994	(f)(r)
241-TX-105		1977	-- (6)		04/83	1989	(g)
241-TX-107	(5)	1984	2500		10/79	1986	(d)
241-TX-110		1977	-- (6)		04/83	1989	(g)
241-TX-113		1974	-- (6)		04/83	1989	(g)
241-TX-114		1974	-- (6)		04/83	1989	(g)
241-TX-115		1977	-- (6)		09/83	1989	(g)
241-TX-116		1977	-- (6)		04/83	1989	(g)
241-TX-117		1977	-- (6)		03/83	1989	(g)
241-TY-101		1973	<1000 (8)		04/83	1980	(f)
241-TY-103		1973	3000	0.7 (l)	02/83	1986	(d)
241-TY-104		1981	1400 (8)		11/83	1986	(d)
241-TY-105		1960	35000	4 (l)	02/83	1986	(d)
241-TY-106		1959	20000	2 (l)	11/78	1986	(d)
241-U-101		1959	30000	20 (l)	09/79	1986	(d)
241-U-104		1961	55000	0.09 (l)	10/78	1986	(d)
241-U-110		1975	5000 to 8100 (8)	0.05 (q)	12/84	1986	(d)(q)
241-U-112		1980	8500 (8)		09/79	1986	(d)
67 Tanks			<750,000 - 1,050,000 (7)				

N/A = not applicable (not yet interim stabilized)

TABLE B-5. SINGLE-SHELL TANKS LEAK VOLUME ESTIMATES

Footnotes:

(1) Current estimates [see Reference (b)] are that 610 Kgallons of cooling water was added to tank A-105 from November 1970 to December 1978 to aid in evaporative cooling. In accordance with Dangerous Waste Regulations [Washington Administrative Code 173-303-070 (2)(a)(ii), as amended, Washington State Department of Ecology, 1990, Olympia, Washington], any of this cooling water that has been added and subsequently leaked from the tank must be classified as a waste and should be included in the total leak volume. In August 1991, the leak volume estimate for this tank was updated in accordance with the WAC regulations. Previous estimates excluded the cooling water leaks from the total leak volume estimates because the waste content (concentration) in the cooling water which leaked should be much less than the original liquid waste in the tank (the sludge is relatively insoluble). The total leak volume estimate in this report (10 to 277 Kgallons) is based on the following (see References):

1. Reference (b) contains an estimate of 5 to 15 Kgallons for the initial leak prior to August 1968.

2. Reference (b) contains an estimate of 5 to 30 Kgallons for the leak while the tank was being sluiced from August 1968 to November 1970.

3. Reference (b) contains an estimate of 610 Kgallons of cooling water added to the tank from November 1970 to December 1978, but it was estimated that the leakage was small during this period. This reference contains the statement "Sufficient heat was generated in the tank to evaporate most, and perhaps nearly all, of this water." This results in a low estimate of zero gallons leakage from November 1970 to December 1978.

4. Reference (c) contains an estimate the 378 to 410 Kgallons evaporated out of the tank from November 1970 to December 1978. Subtracting the minimum evaporation estimate from the cooling water added estimate provides a range from 0 to 232 Kgallons of cooling water leakage from November 1970 to December 1978.

	Low Estimate	High Estimate
Prior to August 1968	5,000	15,000
August 1968 to November 1970	5,000	30,000
November 1970 to December 1978	0	232,000
Totals	10,000	277,000

(2) These leak volume estimates do not include (with some exceptions), such things as: (a) cooling/raw water leaks, (b) intrusions (rain infiltration) and subsequent leaks, (c) leaks inside the tank farm but not through the tank liner (surface leaks, pipeline leaks, leaks at the joint for the overflow or fill lines, etc.), and (d) leaks from catch tanks, diversion boxes, encasements, etc.

(3) In many cases, a leak was suspected long before it was identified or confirmed. For example, Reference (d) shows that tank U-104 was suspected of leaking in 1956. The leak was confirmed in 1961. This report lists the "assumed leaker" date of 1961. Using present standards, tank U-104 would have been declared an assumed leaker in 1956. In 1984, the criteria designations of "suspected leaker," "questionable integrity," "confirmed leaker," "declared leaker," and "borderline and dormant" were merged into one category now reported as "assumed leaker." See Reference (f) for explanation of when, how long, and how fast some of the tanks leaked. It is highly likely that there have been undetected leaks from single-shell tanks because of the nature of their design and instrumentation.

(4) The leak volume estimate date for these tanks is before the declared leaker date because the tank was in a suspected leaker or questionable integrity status; however, a leak volume had been estimated prior to the tank being reclassified.

(5) The increasing radiation levels in drywells and laterals associated with these three tanks could be indicating continuing leak or movement of existing radionuclides in the soil. There is no conclusive way to confirm these observations. (Repeat spectral drywell scans are not part of the current Tank Farm leak detection program but can be run on request a special needs arise. A select subset of drywells is routinely monitored by the Vadose Zone Characterization Project to assess movement of gamma-emitting radionuclides in the subsurface. There are currently no functioning laterals and no plan to prepare them for use).

(6) Methods were used to estimate the leak volumes from these 19 tanks based on the assumption that their cumulative leakage is approximately the same as for 18 of the 24 tanks identified in footnote (9). For more details see Reference (g). The total leak volume estimate for these tanks is 150 Kgallons (rounded to the nearest Kgallon), for an average of approximately 8 Kgallons for each of 19 tanks.

(7) The total has been rounded to the nearest 50 Kgallons. Upper bound values were used in many cases in developing these estimates. It is likely that some of these tanks have not actually leaked.

(8) Leak volume estimate is based solely on observed liquid level decreases in these tanks. This is considered to be the most accurate method for estimating leak volumes.

(9) The curie content shown is as listed in the reference document and is not decayed to a consistent date: therefore, a cumulative total is inappropriate.

(10) Tank C-101 experienced a liquid level decrease in the late 1960s and was taken out of service and pumped to a minimum heel in December 1969. In 1970, the tank was classified as a "questionable integrity" tank. Liquid level data show decreases in level throughout the 1970s and the tank was saltwell pumped during the 1970s, ending in April 1979. The tank was reclassified as a "confirmed leaker" in January 1980. See References (q) and (r); refer to Reference (s) for information on the potential for there to have been leaks from other C-farm tanks (specifically, C-102, C-103, and C-109).

(11) These dates indicate when the tanks were declared to be interim stabilized. In some cases, the official interim stabilization documents were issued at a later date. Also, in some cases, the field work associated with interim stabilization was completed at an earlier date.

(12) Tank T-111 was declared an "assumed re-leaker" on February 28, 1994, due to a decreasing trend in surface level measurement. This tank was pumped, and interim stabilization completed on February 22, 1995.

(13) Tank BX-111 was declared an "assumed re-leaker" in April 1993. Preparations for pumping were delayed, following an administrative hold placed on all tank farm operations in August 1993. Pumping resumed and the tank was declared interim stabilized on March 15, 1995.

(14) The leak volume and curie release estimates on tanks SX-108, SX-109, SX-111, and SX-112 have been re-evaluated using a Historical Leak Model [see Reference (t)]. In general, the model estimates are much higher than the values listed in the table, both for volume and curies released. The values listed in the table do not reflect this revised estimate because, "In particular, it is worth emphasizing that this report was never meant to be a definitive update for the leak baseline at the Hanford Site. It was rather meant to be an attempt to view the issue of leak inventories with a new and different methodology." (This quote is from the first page of the referenced report).

(15) In July 1998, the Washington State Department of Ecology (Ecology) directed the U.S. Department of Energy (DOE) to develop corrective action plans for eight single-shell tank farms (B/BX/BY/S/SX/T/TX/TY) where groundwater contamination likely originated from tank farm operations. A Tri-Party Agreement milestone (M-45 series) was developed that established a formalized approach for evaluating impacts on groundwater quality of loss of tank wastes to the vadose zone underlying these tank farms. Planning documents have been completed for the S, SX, B, BX, and BY tank farms and will be completed for the T, TX, and TY farms. The phase 1 field investigation is near completion in the S and SX

tank farms and has begun in the B, BX, and BY farms. Field work is anticipated in FY-02 for the T, TX, and TY tank farms. The remaining four single-shell tank farms are expected to be included in corrective action plans in the near future.

All of the information included in this appendix is currently under review and significant revisions are anticipated. Recently, major tank farm vadose zone investigative efforts (such as the baseline spectral gamma-ray logging of all drywells in all single-shell tank farms, as well as drilling and sampling in the SX tank farm) were completed. This appendix will be revised as a better understanding of past tank leak events is developed.

SST Vadose Zone Project drilling and testing activities near tank BX-102 were completed in March 2001. A borehole (299-E33-45) was drilled through the postulated uranium plume resulting from the 1951 tank BX-102 overfill event to confirm the presence of uranium, define its present depth, and survey other contaminants of interest such as Tc-99. Thirty-five split-spoon samples were collected for laboratory analyses. This borehole was decommissioned after collection and analysis of groundwater samples.

Borehole W33-46, adjacent to tank B-110, was drilled to a depth of approximately 190 feet in July 2001. Soil samples were collected for analysis as part of the tank farm vadose zone characterization activities. During decommissioning, this borehole was completed as a vadose zone monitoring structure. Work was accomplished in cooperation with scientists from Idaho National Engineering and Environmental Laboratory and Pacific Northwest National Laboratory. This borehole is now the first fully instrumented vadose zone hydrographic monitoring structure to be completed in a Hanford site tank farm.

On July 31, 2002, the Washington State Department of Ecology issued a letter-directive in response to RPP-10757 which suggested a path forward in dealing with the high ^{99}Tc activity in groundwater at well 299-W23-19 near tank SX-115. No formal remediation is required, however, extensive purging of the well is to be done concurrent with quarterly sampling. In addition, an array of specific conductivity probes is to be placed in the well to monitor the electrical properties of the water (^{99}Tc activity is directly proportional to nitrate concentration, and nitrate concentration is proportional to electrical conductivity). A data logger with remote reading capability will be installed together with the specific conductivity probes. Because large volumes of water are to be removed, and because the aquifer is incapable of supporting a high-rate pump, the capability of pumping this well from outside the tank farm fence (to allow non-tank farm trained personnel to operate the pumping system) will be installed in late FY-02 or early FY-03.

References:

(a) Murthy, K. S., et al., June 1983, *Assessment of Single-Shell Tank Residual Liquid Issues at Hanford Site, Washington*, PNL-4688, Pacific Northwest Laboratory, Richland, Washington.

(b) WHC, 1991a, *Tank 241-A-105 Leak Assessment*, WHC-MR-0264, Westinghouse Hanford Company, Richland, Washington.

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(d) Smith, D. A., January 1986, *Single-Shell Tank Isolation Safety Analysis Report*, SD-WM-SAR-006, Rev. 1, Rockwell Hanford Operations, Richland, Washington.

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TABLE B-6. SINGLE-SHELL TANKS MONITORING FREQUENCY STATUS (149 tanks)

September 30, 2002

Legend:	
E	ENRAF Level Gauge
MT	Manual Tape
FIC	Food Instrument Corporation Level Gauge
L	Liquid Observation Well
D,W,Q,Req.	Daily, Weekly, Quarterly, Request
O/S	Out of Service

All data were collected in accordance with Technical Safety Requirement (TSR) and Operating Specification Specification Documents (OSD).

Tank	Surface Level Device (1)	Surface Level Frequency	LOW	LOW Frequency	Thermocouple Tree Risers (1)	Temperature Frequency	Dome Elevation Frequency
A-101	E*	Q	L (2)	W (O/S)	12*	6 mo.	2 yr
A-102	E*	Q			7	6 mo.	2 yr
A-103	E*	Q	L	W	15	6 mo.	2 yr
A-104	E*	Q			17	6 mo.	2 yr
A-105	E*	Q			9,15,16,17,19,22	6 mo.	2 yr
A-106	E*	Q	L	W	14	6 mo.	2 yr
AX-101	E*	Q	L	W	9B*	6 mo.	1 yr
AX-102	E*	Q			9C*	6 mo.	1 yr
AX-103	E*	Q	L	W	9B*	6 mo.	1 yr
AX-104	E*	Q			9C	6 mo.	1 yr
B-101	E*	Q			9	6 mo.	2 yr
B-102	E*	D			4	6 mo.	2 yr
B-103	E*	Q			4*	6 mo.	2 yr
B-104	E*	Q	L	W	5	6 mo.	2 yr
B-105	E*	Q	L	W	15	6 mo.	2 yr
B-106	E*	D			4	6 mo.	2 yr
B-107	E*	Q			3	6 mo.	2 yr
B-108	E*	Q			5	6 mo.	2 yr
B-109	E*	Q			1	6 mo.	2 yr
B-110	E*	Q	L	W	8	6 mo.	2 yr
B-111	E*	Q	L	W	8	6 mo.	2 yr
B-112	E*	D			1	6 mo.	2 yr
B-201	E*	D			1	6 mo.	
B-202	E*	D			1	6 mo.	
B-203	E*	D			1	6 mo.	
B-204	E*	D			1	6 mo.	
BX-101	E*	D			2*	6 mo.	2 yr
BX-102	E*	Q			8*	6 mo.	2 yr
BX-103	E*	D			1*	6 mo.	2 yr
BX-104	E*	D				N/A	2 yr
BX-105	E*	Q			7*	6 mo.	2 yr
BX-106	E*	Q			1*,7*	6 mo.	2 yr
BX-107	E*	D			4*	6 mo.	2 yr
BX-108	E*	Q			5*	6 mo.	2 yr
BX-109	E*	Q			3*,5*	6 mo.	2 yr
BX-110	E*	Q	L	W	1*	6 mo.	2 yr
BX-111	E*	Q	L	W	1*	6 mo.	2 yr
BX-112	E*	D			1*	6 mo.	2 yr
BY-101	MT	Q	L	W	1*	6 mo.	1 yr
BY-102	E*	Q	L	W		N/A	1 yr
BY-103	E*	Q	L	W	1*,5*	6 mo.	1 yr
BY-104	MT	Q	L	W	1*,10B*	6 mo.	1 yr
BY-105	MT	Q	L	W	1*,10C*	6 mo.	1 yr
BY-106	MT	Q	L	W	1*	6 mo.	1 yr
BY-107	MT	Q	L	W	1*,5*	6 mo.	1 yr
BY-108	MT	Q	L	W	3*,8*	6 mo.	1 yr
BY-109	FIC	Q	L	W		N/A	1 yr
BY-110	E	Q	L	W	1*,10A*	6 mo.	1 yr
BY-111	E	Q	L	W	14*	6 mo.	1 yr
BY-112	MT	Q	L	W	2*	6 mo.	1 yr
C-101	E*	Q			2*	6 mo.	2 yr
C-102	E*	Q			7*	6 mo.	2 yr
C-103	E*	D			1*	6 mo.	2 yr
C-104	E*	Q			7*	6 mo.	2 yr

Tank	Surface Level Device (1)	Surface Level Frequency	LOW	LOW Frequency	Thermocouple Tree Risers (1)	Temperature Frequency	Dome Elevation Frequency
C-105	E*	Q			1*	6 mo.	2 yr
C-106	E*	Q			8*,14*	Weekly	2 yr
C-107	E*	D			5*	6 mo.	2 yr
C-108	E*	Q			1*,5*	6 mo.	2 yr
C-109	E*	Q			3*,8*	6 mo.	2 yr
C-110	E*	D			8*	6 mo.	2 yr
C-111	MT	Q			5*,6*	6 mo.	2 yr
C-112	E	Q			1*,8*	6 mo.	2 yr
C-201	MT	Q			6*	6 mo.	
C-202	E	Q			6*	6 mo.	
C-203	MT	Q			6*	6 mo.	
C-204	MT	Q				N/A	
S-101	E*	D	L	W	14*	6 mo.	2 yr
S-102	E*	Q	L	W	3*	6 mo.	2 yr
S-103	E*	D	L	W	4*	6 mo.	2 yr
S-104	E*	Q	L	W	4*	6 mo.	2 yr
S-105	E*	Q	L	W	4*	6 mo.	2 yr
S-106	E*	Q	L	W	2*	6 mo.	2 yr
S-107	E*	D	L	W	4*	6 mo.	2 yr
S-108	E*	Q	L	W	4*	6 mo.	2 yr
S-109	E*	Q	L	W	4*	6 mo.	2 yr
S-110	E*	Q	L	W	4*	6 mo.	2 yr
S-111	E*	D	L	W	4*	6 mo.	2 yr
S-112	E*	Q	L	W	4*	6 mo.	2 yr
SX-101	E*	Q	L	W	15*	6 mo.	1 yr
SX-102	E*	Q	L (5)	W (O/S)	16*	6 mo.	1 yr
SX-103	E*	Q	L	W	2*	Weekly	1 yr
SX-104	E*	Q	L	W	2*	6 mo.	1 yr
SX-105	E*	Q	L	W	2*	6 mo.	1 yr
SX-106	E*	Q	L	W	16*	6 mo.	1 yr
SX-107	E*	Q			10*,14*	Weekly	1 yr
SX-108	E*	Q			10*,19*	Weekly	1 yr
SX-109	E*	Q			10*,19*	Weekly	1 yr
SX-110	E*	Q			12*,20*	Weekly	1 yr
SX-111	E*	Q			10*,19*	Weekly	1 yr
SX-112	E*	Q			10*,19*	Weekly	1 yr
SX-113	E*	Q			3*	6 mo.	1 yr
SX-114	E*	Q			10*,19*	Weekly	1 yr
SX-115	E	Q				N/A	1 yr
T-101	E* (4)	Q			8*	6 mo.	2 yr
T-102	E* (4)	D				N/A	2 yr
T-103	E* (4)	Q			8*	6 mo.	2 yr
T-104	E* (4)	Q	L	W	4*	6 mo.	2 yr
T-105	E* (4)	Q				N/A	2 yr
T-106	E* (4)	Q			8*	6 mo.	2 yr
T-107	E* (4)	D			4*,5*	6 mo.	2 yr
T-108	E* (4)	D			4*	6 mo.	2 yr
T-109	E* (4)	Q			8*	6 mo.	2 yr
T-110	E* (4)	Q	L	W	8*	6 mo.	2 yr
T-111	E* (4)	Q	L	W	5*	6 mo.	2 yr
T-112	E* (4)	D			8*	6 mo.	2 yr
T-201	E* (4)	D			5*	6 mo.	
T-202	E* (4)	D			5*	6 mo.	
T-203	E* (4)	Q			8*	6 mo.	
T-204	E* (4)	D			8*	6 mo.	
TX-101	E*	D				N/A	1 yr
TX-102	E*	Q	L	W	4*	6 mo.	1 yr
TX-103	E*	Q			4*	6 mo.	1 yr
TX-104	E*	Q			4*	6 mo.	1 yr
TX-105	E*	Q	L	LOW Failed	4*	6 mo.	1 yr
TX-106	E*	Q	L	W	4*	6 mo.	1 yr
TX-107	E*	Q			4*	6 mo.	1 yr
TX-108	E*	Q	L	Request (3)	4*	6 mo.	1 yr
TX-109	E*	Q	L	W	8*	6 mo.	1 yr
TX-110	E*	Q	L	W		N/A	1 yr
TX-111	E*	Q	L	W	8*	6 mo.	1 yr
TX-112	E*	Q	L	W	8*	6 mo.	1 yr
TX-113	E*	Q	L	W	8*	6 mo.	1 yr
TX-114	E*	Q	L	W		N/A	1 yr
TX-115	E*	Q	L	W	3*	6 mo.	1 yr

Tank	Surface Level Device (1)	Surface Level Frequency	LOW	LOW Frequency	Thermocouple Tree Risers (1)	Temperature Frequency	Dome Elevation Frequency
TX-116	LOW	Q	L (6)	W (O/S)		N/A	1 yr
TX-117	E*	Q	L	W		N/A	1 yr
TX-118	E*	Q	L	W	1*,3*	6 mo.	1 yr
TY-101	E*	Q			3*,4*	6 mo.	2 yr
TY-102	E*	D			4*	6 mo.	2 yr
TY-103	E*	Q	L	W	4*,7*	6 mo.	2 yr
TY-104	E*	D			3*,4*	6 mo.	2 yr
TY-105	E*	Q	L	W	3*	6 mo.	2 yr
TY-106	E*	Q			2*	6 mo.	2 yr
U-101	MT	D			2*	6 mo.	2 yr
U-102	E	Q	L	W	1*	6 mo.	2 yr
U-103	E*	Q	L	W	1*	6 mo.	2 yr
U-104	MT	Q				N/A	2 yr
U-105	E*	Q	L	W	1*	6 mo.	2 yr
U-106	E*	Q	L	W	1*	6 mo.	2 yr
U-107	E*	D	L	W	1*	6 mo.	2 yr
U-108	E*	Q	L	W	1*	6 mo.	2 yr
U-109	E*	Q	L	W	1*	6 mo.	2 yr
U-110	E	Q	L	W	1*	6 mo.	2 yr
U-111	E	Q	L	W	5*	6 mo.	2 yr
U-112	MT	Q			5*	6 mo.	2 yr
U-201	MT	D			4*	6 mo.	
U-202	MT	D			4*	6 mo.	
U-203	E	Q			4*	6 mo.	
U-204	E	D			4*	6 mo.	

Footnotes:

1. Any ENRAF (E) or thermocouple tree riser that is followed by an asterisk (*) is connected to TMACS for continuous remote monitoring. If there is no asterisk, only manual readings are obtained. Any equipment connected to TMACS collects data multiple times per day, regardless of required frequency.
2. A-101 LOW riser was damaged during saltwell pumping in February 2002. The LOW has failed and dip tube readings are being taken on saltwell pumping (SWP) data sheets. The LOW is not required for leak detection during SWP activity per OSD-00031; when the SWP activity is complete, the LOW will be required to be functional.
3. TX-108 LOW is only monitored on request. Last reading was July 1994.
4. **ENRAFs in T-Farm were all connected to TMACS as of September 9, 2002.**
5. SX-102 LOW is O/S as of 7/17/02. A sharp increase in radiation levels was detected; PER-2002-3914 was issued. Per OSD-00031, weekly scans need not be taken while the tank is being pumped. The automatic ENRAF provides daily readings.
6. TX-116 LOW was breached in August 2002. The ENRAF failed during the LOW installation in March 2002. The ENRAF was removed when the LOW was breached and has not been replaced. The new LOW is expected to be installed for the 4th quarter reading in time for OSD-00031 compliance. The LOW is now the primary leak detection device. **The last LOW reading was taken in August 2002.**

APPENDIX C

MISCELLANEOUS UNDERGROUND STORAGE TANKS AND SPECIAL SURVEILLANCE FACILITIES

TABLE C-1. EAST AND WEST AREA MISCELLANEOUS UNDERGROUND STORAGE TANKS AND SPECIAL SURVEILLANCE FACILITIES

ACTIVE - still running transfers through the associated diversion boxes or pipeline encasements

September 30, 2002

FACILITY	*LOCATION*	*PURPOSE (receives waste from:)*	*WASTE (Gallons)*	*MONITORED BY*	*REMARKS*
EAST AREA					
241-A-302-A	A Farm	A-151 DB	658	SACS/ENRAF/TMACS	Pumped to AW-105 7/00
241-ER-311	B Plant	ER-151, ER-152 DB	2651	SACS/ENRAF/Manually	Pumped to AP-108, 7/01
241-AZ-151	AZ Farm	AZ-702 condensate	4011	SACS/ENRAF/TMACS	Volume changes daily - pumped to AZ-101 or AZ-102 as needed.
241-AZ-154	AZ Farm		25	SACS/MT	
244-BX-TK/SMP	BX Complex	DCRT - Receives from several farms	23466	SACS/MT	Using Manual Tape for tank/sump. Pumped to AP-102 in 8/02.
244-A-TK/SMP	A Complex	DCRT - Receives from several farms	7529	MCS/SACS/WTF	WTF - Data validity uncertain since 4/02 (not primary leak detection method)
A-350	A Farm	Collects drainage	363	MCS/SACS/WTF	WTF (uncorrected) pumped as needed
AR-204	AY Farm	Tanker trucks from various facilities	525	DIP TUBE	Alarms on SACS-pumped to AP-108, 7/00
A-417	A Farm		14108	SACS/WTF(Zipcord)	WTF O/S 6/01; readings taken by zip cord
CR-003-TK/SUMP	C Farm	DCRT	3007	MT/ZIP CORD	Zip cord in sump O/S; water intrusion, 1/98
WEST AREA					
241-TX-302-C	TX Farm	TX-154 DB	170	SACS/ENRAF	Now on TMACS. ATP 9/26/02.
241-U-301-B	U Farm	U-151, U-152, U-153, U-252 DB	2942	SACS/ENRAF/Manually	Returned to service 12/30/93
241-UX-302-A	U Plant	UX-154 DB	4014	SACS/ENRAF/Manually	Recalibrated 7/15/02 after 6/01/02 repair.
241-S-304	S Farm	S-151 DB	135	SACS/ENRAF/Manually	Replaced S-302-A in 10/91; ENRAF installed 7/98. Sump not alarming.
244-S-TK/SMP	S Farm	From original tanks to SY-102	43303	SACS/Manually	WTF (uncorrected). Used 999 gal to flush 9/2/02. WF increased to 141.0
244-TX-TK/SMP	TX Farm	From original tanks to SY-102	15085	SACS/Manually	MT - pumped 6/02 to SY-102.
Vent Station Catch Tank		Cross Country Transfer Line	394	SACS/Manually	MT

Total Active Facilities	17

LEGEND:		
	DB -	Diversion Box
	DCRT -	Double-Contained Receiver Tank
	TK, SMP -	Tank, Sump
	ENRAF -	Surface Level Measurement Devices
	MT -	Manual Tape - Surface Level Measurement Device
	Zip Cord -	Surface Level Measurement Device
	WTF-	Weight Time Factor - can be recorded as WTF, CWF (corrected), and Uncorrected WTF
	SACS -	Surveillance Automated Control System
	MCS -	Monitor and Control System
	Manually -	Not connected to any automated system
	O/S -	Out of Service

TABLE C-2. EAST AREA INACTIVE MISCELLANEOUS UNDERGROUND STORAGE TANKS AND SPECIAL SURVEILLANCE FACILITIES (CURRENTLY MANAGED BY CHG)

INACTIVE - no longer receiving waste transfers

September 30, 2002

FACILITY	LOCATION	RECEIVED WASTE FROM: (or descrip.)	WASTE (Gallons)	MONITORED BY	REMARKS
209-E-TK-111	209 E Bldg	Decon Catch Tank	Empty	NM	Removed from service 1988
216-BY-201	BY Farm	TBP Waste Line	Unknown	NM	
241-A-302-B	A Farm	A-152 DB	5876	SACS/MT	Isolated 1985, Project B-138 Interim Stabilized 1990, Rain intrusion
241-AX-151	N of PUREX	PUREX	Unknown	NM	Isolated 1985
241-AX-152	AX Farm	AX-152 DB	0	SACS/MT	Declared Assumed Leaker; pumped to AY-102 3/1/01, no longer being used
241-B-301-B	B Farm	B-151, B-152, B-153, B-252 DB	22250	NM	Isolated 1985 (1)
241-B-302-B	B Farm	B-154 DB	4930	NM	Isolated 1985 (1)
241-BX-302-A	BX Farm	BR-152, BX-153, BXR-152, BYR-152 DB	840	NM	Isolated 1985 (1)
241-BX-302-B	BX Farm	BX-154 DB	1040	NM	Isolated 1985 (1)
241-BX-302-C	BX Farm	BX-155 DB	870	NM	Isolated 1985 (1)
241-BY-ITS2-Tk 2	BY Farm	Heater Flush Tank	Unknown	NM	Stabilized 1977
241-C-301-C	C Farm	C-151, C-152, C-153, C-252 DB	10470	NM	Isolated 1985 (1)
241-ER-311A	SW B Plant	ER-151 DB	Empty	NM	Abandoned in place 1954
244-AR Vault	A Complex	Between farms & B-Plant	Unknown	NM	Not actively being used, systems activated for final clean out.
244-BXR-TK/SMP-001	BX Farm	Transfer lines	7200	NM	Interim Stabilization 1985 (1)
244-BXR-TK/SMP-002	BX Farm	Transfer lines	2180	NM	Interim Stabilization 1985 (1)
244-BXR-TK/SMP-003	BX Farm	Transfer lines	1810	NM	Interim Stabilization 1985 (1)
244-BXR-TK/SMP-011	BX Farm	Transfer lines	7100	NM	Interim Stabilization 1985 (1)

Total East Area Inactive Facilities	18

LEGEND:		
	DB -	Diversion Box
	MT -	Manual Tape
	SACS -	Surveillance Automated Control System
	TK, SMP -	Tank, Sump
	NM -	Not Monitored

(1) SOURCE: WHC-SD-WM-TI-356, "Waste Storage Tank Status & Leak Detection Criteria," Rev. 0, September 30, 1988

TABLE C-3. WEST AREA INACTIVE MISCELLANEOUS UNDERGROUND STORAGE TANKS AND SPECIAL SURVEILLANCE FACILITIES (CURRENTLY MANAGED BY CHG)

INACTIVE - no longer receiving waste transfers

September 30, 2002

FACILITY	*LOCATION*	*RECEIVED WASTE FROM:(or descrip)*	*WASTE (Gallons)*	*MONITORE BY*	*REMARKS*
213-W-TK-1	E of 213-W Compactor Facility	Water Retention Tank	Unknown	NM	Contains only water
231-W-151-001	N. of Z Plant	231-Z Floor drains	Unknown	NM	Inactive, last data 1974
231-W-151-002	N. of Z Plant	231-Z Floor drains	Unknown	NM	Inactive, last data 1974
241-S-302	S Farm	240-S-151 DB	8267	SACS/ENRAF	Assumed Leaker EPDA 85-04
241-S-302-A	S Farm	241-S-151 DB	0		Assumed Leaker TF-EFS-90-042
Partially filled with grout 2/91, determined still to be an assumed leaker after leak test. Manual FIC readings are unobtainable due to dry grouted surface.					
CASS monitoring system retired 2/23/99; intrusion readings discontinued. S-304 replaced S-302-A					
241-S-302-B	S Farm	S Encasements	Empty	NM	Isolated 1985 (1)
241-SX-302 (SX-304)	SX Farm	SX-151 DB, 151 TB	Unknown	NM	Isolated 1987
241-T-301	T Farm	DB T-151, -151, -153, -252	Unknown	NM	Isolated 1985 (241-T-301B)
241-TX-302	TX Farm	TX-153 DB	Unknown	NM	Isolated 1985 (1)
241-TX-302-X-B	TX Farm	TX Encasements	Unknown	NM	Isolated 1985 (1)
241-TX-302-B	TX Farm	TX-155 DB	1600	SACS/ENRAF	New ENRAF installed 9/10/02; ATP 9/26/02
241-TX-302-B(R)	E. of TX Farm	TX-155 DB	Unknown	NM	Isolated
241-TY-302-A	TY Farm	TX-153 DB	Unknown	NM	Isolated 1985 (1)
241-TY-302-B	TY Farm	TY Encasements	Empty	NM	Isolated 1985 (1)
241-Z-8	E. of Z Plant	Recuplex waste	Unknown	NM	Isolated, 1974, 1975
242-T-135	T Evaporator	T Evaporator	Unknown	NM	Isolated
242-TA-R1	T Evaporator	Z Plant waste	Unknown	NM	Isolated
243-S-TK-1	N. of S Farm	Personnel Decon. Facility	Empty	NM	Isolated
244-TXR-TK/SMP-001	TX Farm	Transfer lines	Unknown	NM	Interim Stabilized, MT removed 1984 (1)
244-TXR-TK/SMP-002	TX Farm	Transfer lines	Unknown	NM	Interim Stabilized, MT removed 1984 (1)
244-TXR-TK/SMP-003	TX Farm	Transfer lines	Unknown	NM	Interim Stabilized, MT removed 1984 (1)
244-UR-001 Vault TK	U-Farm	Tank, Sump and Cell	4220	NM	Stabilized 1985
244-UR-002 Vault TK	U-Farm	Tank, Sump and Cell	1400	NM	Stabilized 1985
244-UR-003 Vault Tk	U-Farm	Tank, Sump and Cell	5996	NM	Stabilized 1985
244-UR-004 Vault Tk	U-Farm	Tank, Sump and Cell	Empty	NM	Stabilized 1985

Total West Area Inactive Facilities 25

LEGEND:		
	DB, TB -	Diversion Box, Transfer Box
	CASS -	Computer Automated Surveillance System
	FIC, ENRAF -	Surface Level Measurement Devices
	MT -	Manual Tape - Surface Level Measurement Device
	TK, SMP -	Tank, Sump
	SACS -	Surveillance Automated Control System
	R -	Replacement
	NM -	Not Monitored

(1) SOURCE: WHC-SD-WM-TI-356, "Waste Storage Tank Status & Leak Detection Criteria," Rev. 0, September 30, 1988

APPENDIX D

GLOSSARY OF TERMS

TABLE D-1. GLOSSARY OF TERMS

1. DEFINITIONS

WASTE TANKS - General

Waste Tank Safety Issue

A potentially unsafe condition in the handling of waste material in underground storage tanks that requires corrective action to reduce or eliminate the unsafe condition. There are currently no waste tank safety issues.

Characterization

Characterization is understanding the Hanford tank waste chemical, physical, and radiological properties to the extent necessary to ensure safe storage and interim operation, and ultimate disposition of the waste.

WASTE TYPES

Aging Waste (AW)

High level, first cycle solvent extraction waste from the PUREX plant (NCAW).

Concentrated Complexant (CC)

Concentrated product from the evaporation of dilute complexed waste.

Concentrated Phosphate Waste (CP)

Waste originating from the decontamination of the N Reactor in the 100 N Area. Concentration of this waste produces concentrated phosphate waste.

Dilute Complexed Waste (DC)

Characterized by a high content of organic carbon including organic complexants: ethylenediaminetetraacetic acid (EDTA), citric acid, and hydroxyethyl-ethylenediaminetriacetic acid (HEDTA), were the major complexants used. Main sources of DC waste in the DST system are saltwell liquid inventory (from SSTs).

Dilute Non-Complexed Waste (DN)

Low activity liquid waste originating from S and T Plants, the 300 and 400 Areas, PUREX facility (decladding supernatant and miscellaneous wastes), 100 N Area (sulfate waste), B Plant, saltwells, and PFP (supernatant).

Drainable Interstitial Liquid (DIL)

Interstitial liquid that is not held in place by capillary forces and will, therefore, migrate or move by gravity.

Double-Shell Slurry (DSS)

Waste that exceeds the sodium aluminate saturation boundary in the evaporator without exceeding receiver tank composition limits. For reporting purposes, DSS is considered a solid.

Double-Shell Slurry Feed (DSSF)

Waste concentrated just before reaching the sodium aluminate saturation boundary in the evaporator without exceeding receiver tank composition limits. This form is not as concentrated as DSS.

Evaporator Feed Tank (EVFD)

Dilute waste staged for evaporation; waste type will vary (usually DN or DC).

Slurry Receiver Tank (SRCVR)

Concentrated waste produced by evaporation; waste type will vary (usually DSSF or CC).

Supernatant Liquid

The liquid above the solids or in large liquid pools covered by floating solids in waste storage tanks.

INTERIM STABILIZATION (Single-Shell Tanks only)

Interim Stabilized (IS)

A tank which contains less than 50 Kgallons of drainable interstitial liquid and less than 5 Kgallons of supernatant. If the tank was jet pumped to achieve interim stabilization, then the jet pump flow or saltwell screen inflow must also have been at or below 0.05 gpm before interim stabilization criteria are met.

Jet Pump

The jet pump system includes 1) a jet assembly with foot valve mounted to the base of two pipes that extend from the top of the well casing to near the bottom of the well casing inside the saltwell screen, 2) a centrifugal pump to supply power fluid to the down-hole jet assembly, 3) flexible or rigid transfer jumpers, 4) a flush line, and 5) a flowmeter. The jumpers contain piping, valves, and pressure and limit switches.

The centrifugal pump and jet assembly are needed to pump the interstitial liquid from the saltwell screen into the pump pit, nominally a 40-foot elevation rise. The power fluid passes through a nozzle in the jet assembly and acts to convert fluid pressure head to velocity head, thereby reducing the pressure in the jet assembly chamber. The reduction in pressure allows the interstitial liquid to enter the jet assembly chamber and mix with the power fluid. Velocity head is converted to pressure head above the nozzle, lifting power fluid, and interstitial liquid to the pump pit. Pumping rates vary from 0.05 to about 4 gpm.

Saltwell Screen

The saltwell system is a 10-inch diameter saltwell casing consisting of a stainless steel saltwell screen welded to a Schedule 40 carbon steel pipe. The casing and screen are to be inserted into the 12-inch tank riser located in the pump pit. The stainless steel screen portion of the system will extend through the tank waste to near the bottom of the tank. The saltwell screen portion of the casing is an approximately 10-foot length of 300 Series, 10-inch diameter, stainless steel pipe with screen openings (slots) of 0.05 inches.

Emergency Pumping Trailer

A 45-foot tractor-type trailer is equipped to provide storage space and service facilities for emergency pumping equipment: this consists of two dedicated jet pump jumpers and two jet pumps, piping and dip tubes for each, two submersible pumps and attached piping, and a skid-mounted Weight Factor Instrument Enclosure with an air compressor and electronic recording instruments. The skid also contains a power control station for the pumps, pump pit leak detection, and instrumentation. A rack for over 100 feet of overground double-contained piping is also in the trailer.

INTRUSION PREVENTION (ISOLATION) (Single-Shell Tanks only)

Partially Interim Isolated (PI)

The administrative designation reflecting the completion of the physical effort required for Interim Isolation except for isolation of risers and piping that is required for jet pumping or for other methods of stabilization.

Interim Isolated (II)

The administrative designation reflecting the completion of the physical effort required to minimize the addition of liquids into an inactive storage tank, process vault, sump, catch tank, or diversion box. In June 1993 the term "Interim Isolation" was replaced by "Intrusion Prevention."

Intrusion Prevention (IP)

Intrusion Prevention is the administrative designation reflecting the completion of the physical effort required to minimize the addition of liquids into an inactive storage tank, process vault, sump, catch tank, or diversion box. Under no circumstances are electrical or instrumentation devices disconnected or disabled during the intrusion prevention process (with the exception of the electrical pump).

TANK INTEGRITY

Sound

The integrity classification of a waste storage tank for which surveillance data indicate no loss of liquid attributed to a breach of integrity.

Assumed Leaker

The integrity classification of a waste storage tank for which surveillance data indicate a loss of liquid attributed to a breach of integrity.

Assumed Re-Leaker

A condition that exists after a tank has been declared as an "assumed leaker" and then the surveillance data indicate a new loss of liquid attributed to a breach of integrity.

TANK INVESTIGATION

Intrusion

A term used to describe the infiltration of liquid into a waste tank.

SURVEILLANCE INSTRUMENTATION

Drywells

Historically, the drywells were monitored with gross logging tools as part of a secondary leak monitoring system. In some cases, neutron-moisture sensors were used to monitor moisture in the soil as a function of well depth, which could be indicative of tank leakage. The routine gross gamma logging data were stored electronically from 1974 through 1994. The routine gross gamma logging program ended in 1994. A program was initiated in 1995 to log each of the available drywells in each tank farm with a spectral gamma logging system. The spectral gamma logging system provides quantitative values for gamma-emitting radionuclides. The baseline spectral gamma logging database is available electronically.

Repeat spectral drywell scans are not part of the established Tank Farm leak detection program, but they can be run on request if special needs arise. A select subset of drywells is routinely monitored by the Vadose Zone Characterization Project to assess movement of gamma-emitting radionuclides in the subsurface.

Laterals

Laterals are horizontal drywells positioned under single-shell waste storage tanks to detect radionuclides in the soil which could be indicative of tank leakage. These drywells can be monitored by radiation detection probes. Laterals are 4-inch inside diameter steel pipes located 8 to 10 feet below the tank's concrete base. There are three laterals per tank. Laterals are located only in A and SX farms. There are currently no functioning laterals and no plan to prepare them for use.

Surface Levels

The surface level measurements in all waste storage tanks are monitored by manual or automatic conductivity probes, and recorded and transmitted or entered into the Surveillance Analysis Computer System.

Automatic FIC

An automatic waste surface level measurement device is manufactured by the Food Instrument Corporation (FIC). The instrument consists of a conductivity electrode (plummet) connected to a calibrated steel tape, a steel tape reel housing and a controller that automatically raises and lowers the plummet to obtain a waste surface level reading. The controller can provide a digital display of the data and until February 1999, the majority of the FICs transmitted readings to the Computer Automated Computer Surveillance System (CASS). Since CASS retirement, all FIC gauges are read manually. FICs are being replaced by ENRAF detectors (see below).

ENRAF 854 ATG Level Detector

FICs and some manual tapes are in the process of being replaced by the ENRAF ATG 854 level detector. The ENRAF gauge, fabricated by ENRAF Incorporated, determines waste level by detecting variations in the weight of a displacer suspended in the tank waste. The displacer is connected to a wire wound onto a precision measuring drum. A change in the waste level causes a change in the weight of the displacer which will be detected by the force transducer. Electronics within the gauge causes the servo motor to adjust the position of the displacer and compute the tank level based on the new position of the displacer drum. The gauge displays the level in decimal inches. The first few ENRAFs that received remote reading capability transmit liquid level data via analog output to the TMACS. The remaining ENRAFs and future installations will transmit digital level data to TMACS via an ENRAF Computer Interface Unit (CIU). The CIU allows fully remote communication with the gauge, minimizing tank farm entry.

Annulus

The annulus is the space between the inner and outer shells on DSTs only. Drain channels in the insulating and/or supporting concrete carry any leakage to the annulus space where conductivity probes are installed. The annulus conductivity probes and radiation detectors are the primary means of leak detection for all DSTs.

Liquid Observation Well (LOW)

In-tank liquid observation wells are used for monitoring the ILL in single-shell tanks. The wells are usually constructed of fiberglass or TEFZEL-reinforced epoxy-polyester resin (TEFZEL is a trademark of E. I. du Pont de Nemours & Company). There are a few LOWs constructed of steel. LOWs are sized to extend to within 1 inch of the bottom of the waste tank, are sealed at their bottom ends, and have a nominal outside diameter of 3.5 inches. Gamma and neutron probes are used to monitor changes in the ILL, and can indicate intrusions or leakage by increases or decreases in the ILL. There are 65 LOWs (64 are in operation) installed in SSTs that contain or are capable of containing greater than 50 Kgallons of drainable interstitial liquid. Two LOWs installed in DSTs SY-102 and AW-103 are used for special, rather than routine, surveillance purposes only.

Thermocouple (TC)

A thermocouple is a thermoelectric device used to measure temperature. More than one thermocouple element on a device (probe) is called a thermocouple tree. In DSTs there may be one or more thermocouple trees in risers in the primary tank. In addition, in DSTs only, there are TC elements installed in the insulating concrete, the lower primary tank knuckle, the secondary tank concrete foundation, and in the outer structural concrete.

These monitor temperature gradients within the concrete walls, bottom of the tank, and the domes. In SSTs, one or more thermocouples may be installed directly in a tank, although some SSTs do not have any trees installed. A single TC element may be installed in a riser or lowered down an existing riser or LOW. There are also four thermocouple laterals beneath tank 105-A in which temperature readings are taken in 34 TC elements.

In-tank Photographs and Videos

In-tank photographs and videos may be taken to aid in resolving in-tank measurement anomalies and determine tank integrity. Photographs and videos help determine sludge and liquid levels by visual examination.

ACRONYMS - Waste Type acronyms begin on Page D-2

BBI — Best Basis Inventory

CCS — Controlled, Clean, and Stable (tank farms)

CHG — CH2M HILL Hanford Group, Inc.

DCRT — Double-Contained Receiver Tank

DST	Double-Shell Tank
FSAR	Final Safety Analysis Report effective October 18, 1999
Gal	Gallon
GPM	Gallons Per Minute
II	Interim Isolated
Kgal	Kilogallons
IP	Intrusion Prevention Completed
IS	Interim Stabilized
MT/FIC/ ENRAF	Manual Tape, Food Instrument Corporation, ENRAF Corporation (surface level measurement devices)
OSD	Operating Specifications Document
PI	Partial Interim Isolated
PFP	Plutonium Finishing Plant
SAR	Safety Analysis Report
SHMS	Standard Hydrogen Monitoring System
SST	Single-Shell Tank
SWL	Salt Well Liquid
TMACS	Tank Monitor and Control System
TPA	Hanford Federal Facility Consent and Compliance Order, "Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy," as amended (Tri-Party Agreement)
TSR	Technical Safety Requirement
USQ	Unreviewed Safety Question

Additional definitions (used in the SST Inventory columns) follow: (IL, DIL, DLR, PLR, etc.)

2. INVENTORY AND STATUS BY TANK – COLUMN VOLUME CALCULATIONS AND DEFINITIONS FOR TABLE B-1 (Single-Shell Tanks only)

COLUMN HEADING	COLUMN VOLUME CALCULATIONS (Underlined)/DEFINITIONS
Total Waste	Solids volume plus Supernatant Liquid. Solids include sludge and saltcake (see definitions below).
Supernatant Liquid (1)	May be either measured or estimated. Supernatant is either the estimated or measured liquid floating on the surface of the waste or under a floating solids crust. In-tank photographs or videos are useful in estimating the liquid volumes; liquid floating on solids and core sample data are useful in estimating large liquid pools under a floating crust.
Drainable Interstitial Liquid (DIL) (1)	This is initially calculated. Drainable interstitial liquid is calculated based on the saltcake and sludge volumes, using calculated porosity values from past pumping or actual data for each tank. Interstitial liquid is liquid that fills the interstitial spaces of the solids waste. The sum of the interstitial liquid contained in saltcake and sludge minus an adjustment for capillary height is the initial volume of drainable interstitial liquid.
Pumped This Month	Net total gallons of liquid pumped from the tank during the month. If supernatant is present, pump production is first subtracted from the supernatant volume. The remainder is then subtracted from the drainable interstitial liquid volume.
Total Pumped (1)	Cumulative net total gallons of liquid pumped from 1979 to date.
Drainable Liquid Remaining (DLR) (1)	Supernatant plus Drainable Interstitial Liquid. The total Drainable Liquid Remaining is the sum of drainable interstitial liquid and supernatant.
Pumpable Liquid Remaining (PLR) (1)	Drainable Liquid Remaining minus unpumpable volume. Not all drainable interstitial liquid is pumpable.
Sludge	Solids formed during sodium hydroxide additions to waste. Sludge was usually in the form of suspended solids when the waste was originally received in the tank from the waste generator. In-tank photographs or videos may be used to estimate the volume.
Saltcake	Results from crystallization and precipitation after concentration of liquid waste, usually in an evaporator. If saltcake is layered over sludge, it is only possible to measure total solids volume. In-tank photographs or videos may be used to estimate the saltcake volume.
Solids Volume Update	Indicates the latest update of any change in the solids volume.
Solids Update Source - See Footnote	Indicates the source or basis of the latest solids volume update.
Last In-Tank Photo	Date of last in-tank photographs taken.
Last In-Tank Video	Date of last in-tank video taken.
See Footnotes for These Changes	Indicates any change made the previous month. A footnote explanation for the change follows the Inventory and Status by Tank Appendix (Table B-1).

(1) Volumes for supernatant, DIL, DLR, and PLR are not shown in these columns until interim stabilization is completed. Total gallons pumped, total waste, sludge, and saltcake volumes are shown and adjusted based on actual pumping volumes.

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APPENDIX E

TANK CONFIGURATION AND FACILITIES CHARTS

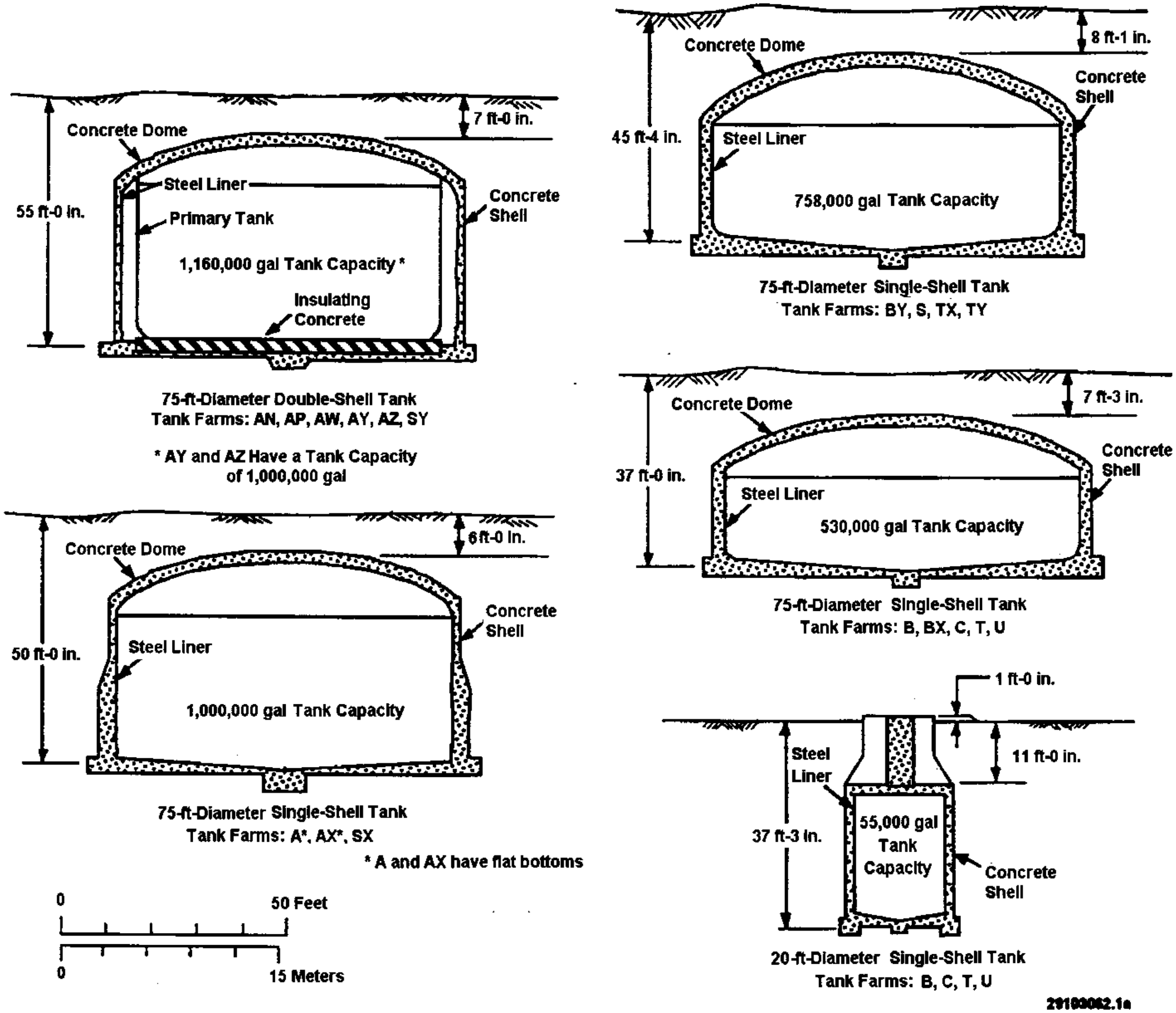


Figure E-1. High-Level Waste Tank Configurations

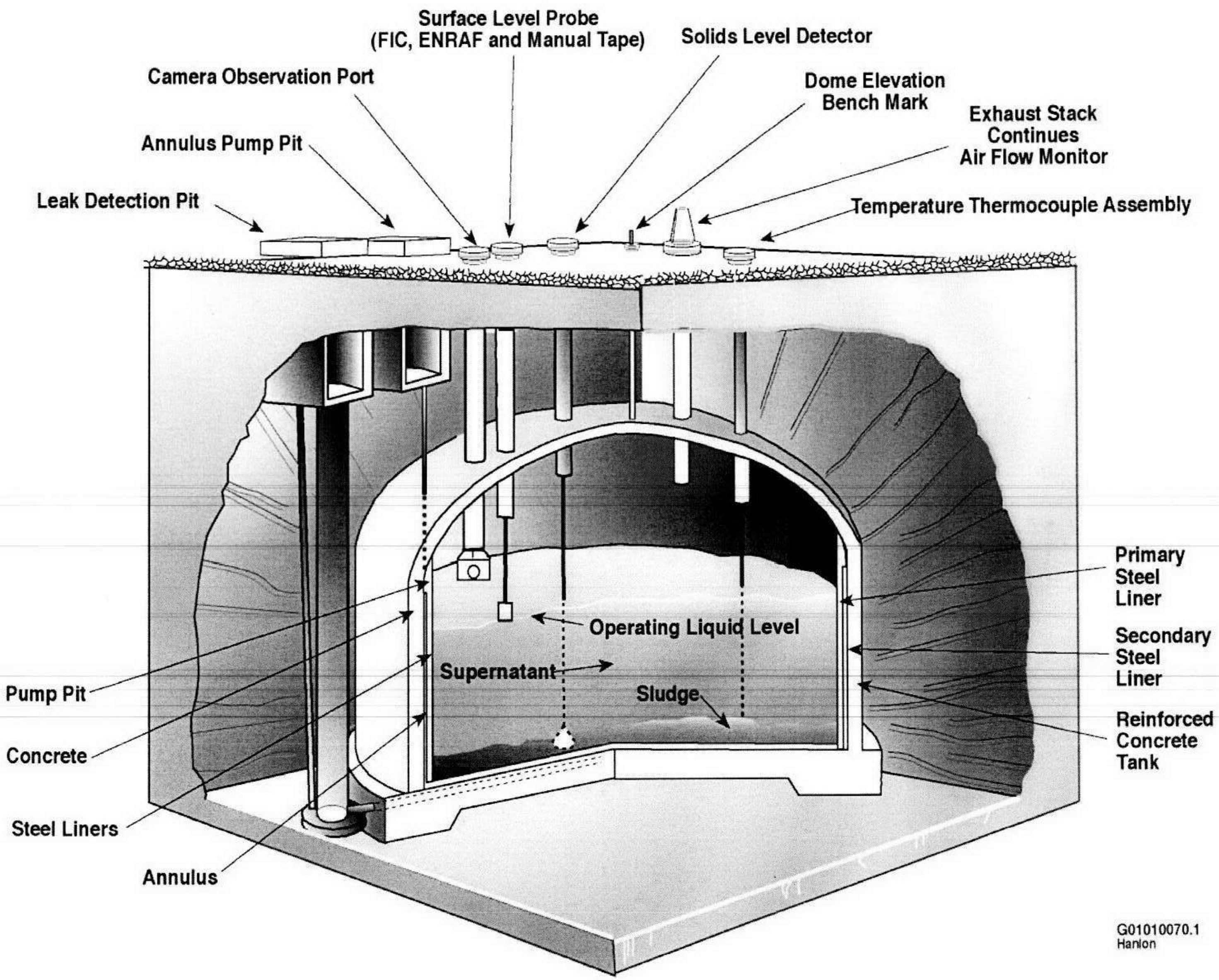


Figure E-2. Double-Shell Tank Instrumentation Configuration

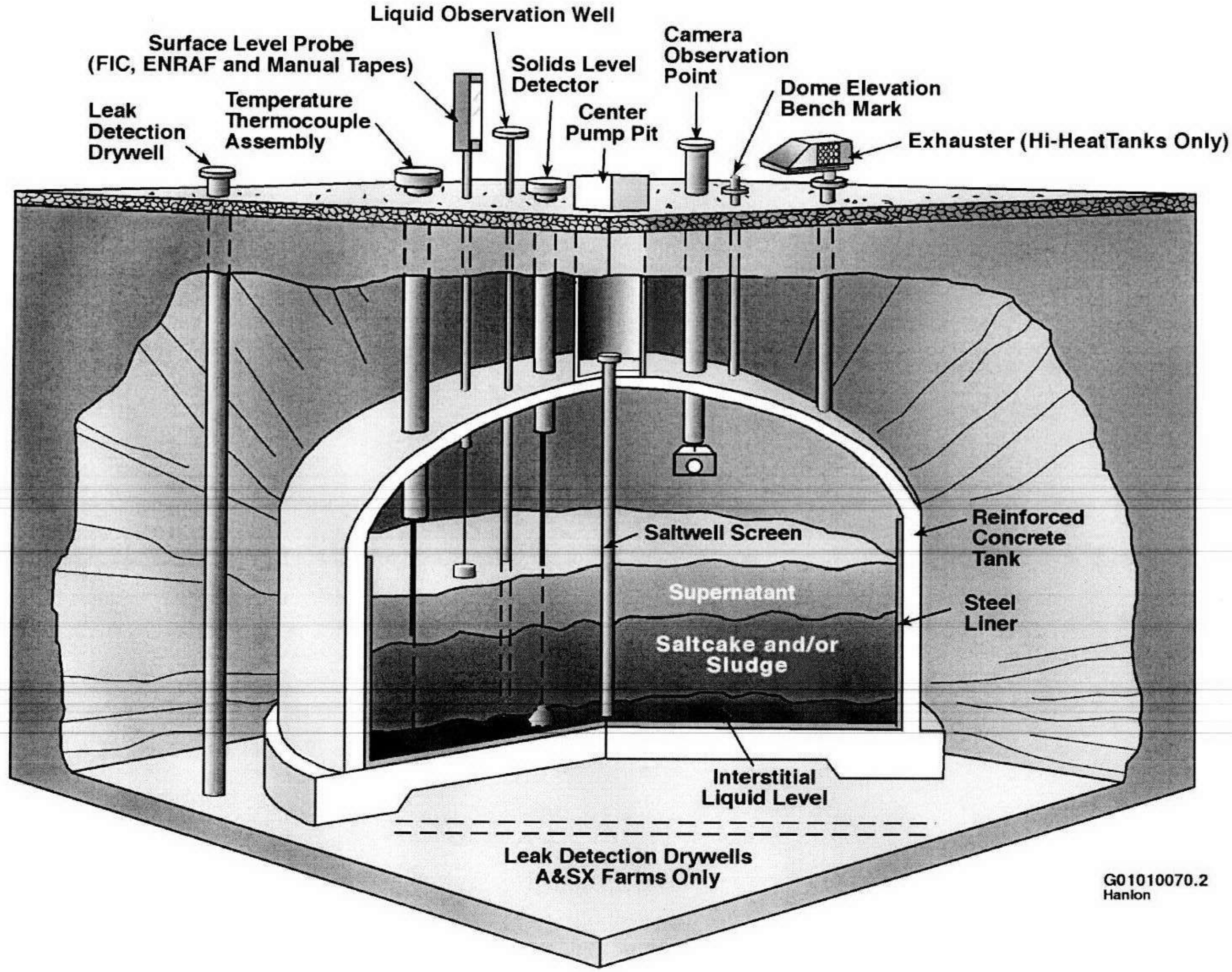


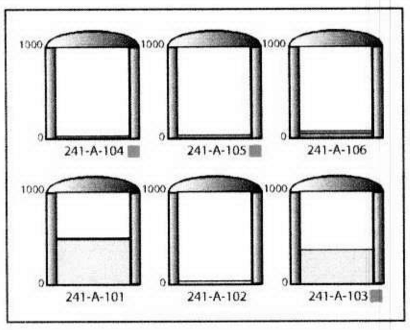
Figure E-3. Single-Shell Tank Instrumentation Configuration

200 East Tank Waste Contents

A-Tank Farm- 1954-55

6 @ 1,000,000 GAL. Tank Capacity, Single-Shell

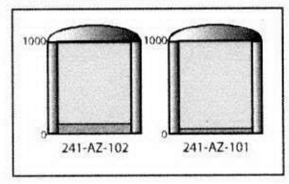
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-A-101	3	482	17
241-A-102	0	36	2
241-A-103■	2	364	4
241-A-104■	28	0	0
241-A-105■	37	0	0
241-A-106	50	29	0



AZ-Tank Farm- 1975-76

2 @ 1,000,000 GAL. Tank Capacity, Double-Shell

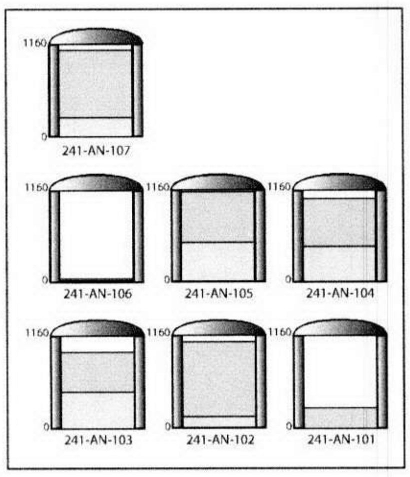
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-AZ-101	52	0	945
241-AZ-102	105	0	886



AN-Tank Farm- 1981

7 @ 1,160,000 GAL. Tank Capacity, Double-Shell

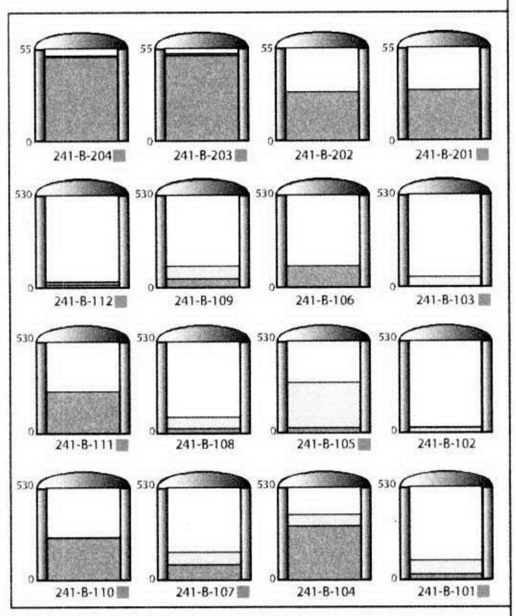
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-AN-101	0	0	253
241-AN-102	0	140	938
241-AN-103	0	459	500
241-AN-104	0	445	609
241-AN-105	0	492	636
241-AN-106	0	17	29
241-AN-107	0	237	847



B-Tank Farm- 1945-47

12 @ 530,000 GAL. Tank Capacity, Single-Shell
4 @ 55,000 GAL. Tank Capacity, Single-Shell

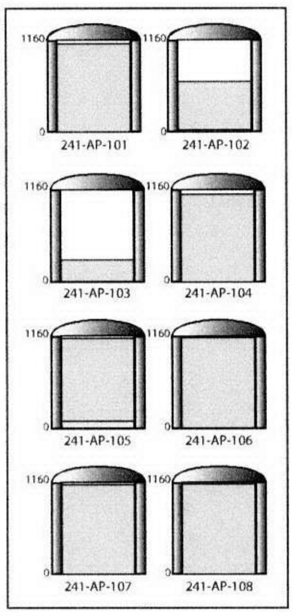
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-B-101■	28	81	0
241-B-102	0	28	4
241-B-103■	1	55	0
241-B-104	309	65	0
241-B-105■	28	262	0
241-B-106	121	0	1
241-B-107■	86	75	0
241-B-108	27	65	0
241-B-109	50	75	0
241-B-110■	244	0	1
241-B-111■	241	0	1
241-B-112■	15	17	3
241-B-201■	30	0	0
241-B-202	29	0	0
241-B-203■	51	0	1
241-B-204■	50	0	1



AP-Tank Farm-1986

8 @ 1,160,000 GAL. Tank Capacity, Double-Shell

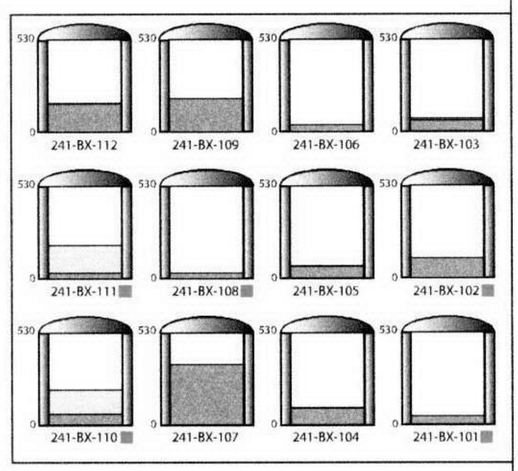
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-AP-101	0	0	1114
241-AP-102	23	0	616
241-AP-103	0	0	281
241-AP-104	0	0	1106
241-AP-105	0	89	1043
241-AP-106	0	0	1140
241-AP-107	0	0	1127
241-AP-108	0	0	1135



BX- Tank Farm- 1948-50

12 @ 530,000 GAL. Tank Capacity, Single-Shell

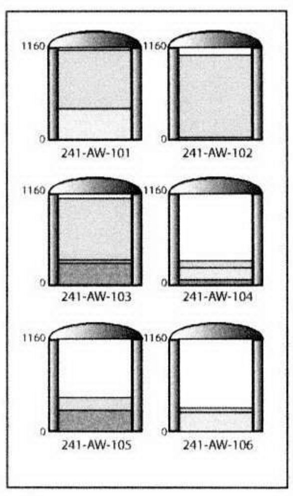
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-BX-101■	48	0	0
241-BX-102■	112	0	0
241-BX-103	62	0	11
241-BX-104	97	0	3
241-BX-105	67	0	5
241-BX-106	38	0	0
241-BX-107	347	0	0
241-BX-108■	31	0	0
241-BX-109	193	0	0
241-BX-110■	65	139	1
241-BX-111■	32	157	0
241-BX-112	163	0	1



AW-Tank Farm-1980

6 @ 1,160,000 GAL. Tank Capacity, Double-Shell

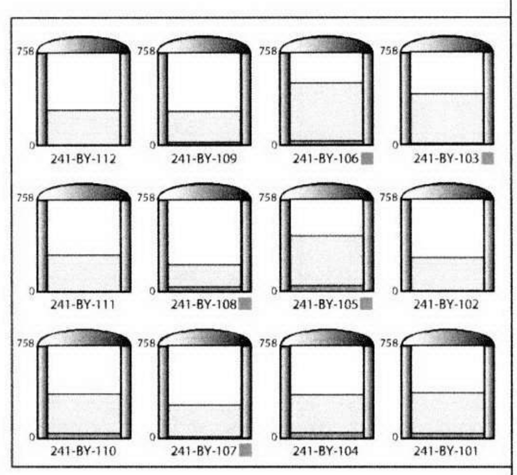
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-AW-101	0	388	740
241-AW-102	30	0	1034
241-AW-103	273	40	788
241-AW-104	66	157	90
241-AW-105	263	0	161
241-AW-106	0	239	56



BY-Tank Farm- 1950-51

12 @ 758,000 GAL. Tank Capacity, Single-Shell

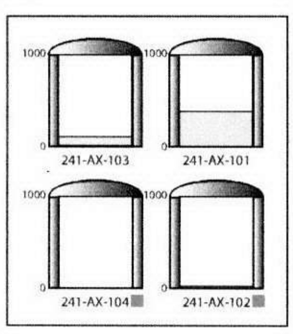
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-BY-101	37	333	0
241-BY-102	0	277	0
241-BY-103■	9	407	0
241-BY-104	45	313	0
241-BY-105■	48	410	0
241-BY-106■	32	479	0
241-BY-107■	15	257	0
241-BY-108■	40	182	0
241-BY-109	24	253	0
241-BY-110	43	323	0
241-BY-111	0	302	0
241-BY-112	2	284	0



AX-Tank Farm- 1965-66

4 @ 1,000,000 GAL. Tank Capacity, Single-Shell

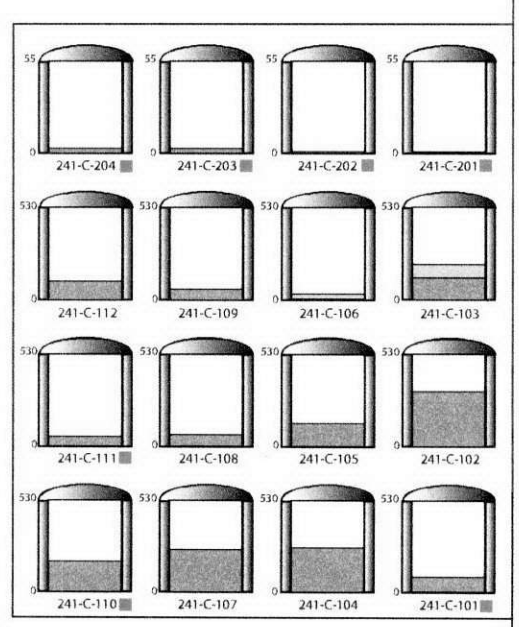
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-AX-101	3	382	0
241-AX-102■	6	24	0
241-AX-103	8	100	0
241-AX-104■	7	0	0



C-Tank Farm- 1946-53

12 @ 530,000 GAL. Tank Capacity, Single-Shell
4 @ 55,000 GAL. Tank Capacity, Single-Shell

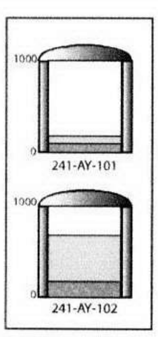
Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-C-101■	88	0	0
241-C-102	316	0	0
241-C-103	125	0	77
241-C-104	259	0	0
241-C-105	132	0	0
241-C-106	6	0	30
241-C-107	248	0	0
241-C-108	66	0	0
241-C-109	63	0	0
241-C-110■	177	0	1
241-C-111■	57	0	0
241-C-112	104	0	0
241-C-201■	1	0	0
241-C-202■	1	0	0
241-C-203■	3	0	0
241-C-204■	3	0	0



AY-Tank Farm- 1971-76

2 @ 1,000,000 GAL. Tank Capacity, Double-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-AY-101	96	0	85
241-AY-102	171	0	507



LEGEND: Sludge, Saltcake, Supernatant, Available Space, Assumed/Confirmed Leaker ■

Data Derived From Waste Tank Summary Report Dated 9/30/02

CH2MHILL

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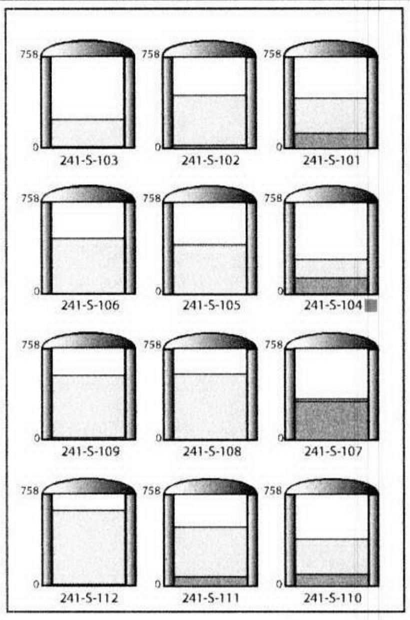
Figure E-4

200 West Tank Waste Contents

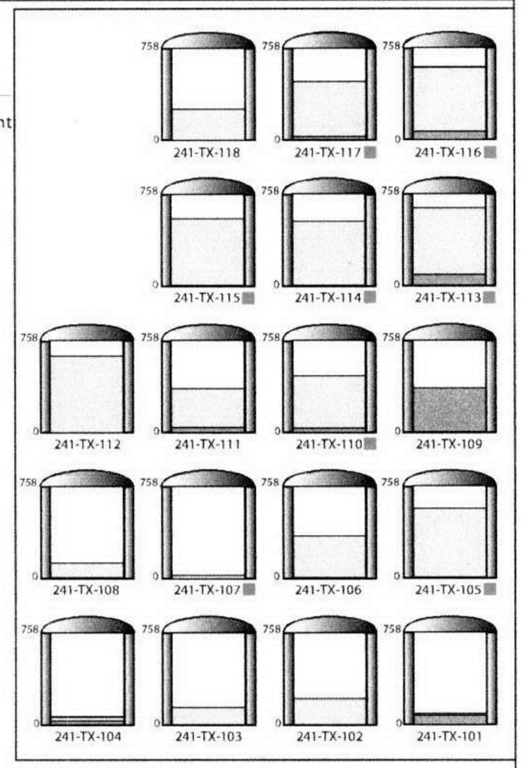
S-Tank Farm- 1950-51
12 @ 758,000 GAL. Tank Capacity, Single-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-S-101	122	292	0
241-S-102	22	421	0
241-S-103	9	227	1
241-S-104 ■	132	156	0
241-S-105	2	404	0
241-S-106	0	455	0
241-S-107	323	20	0
241-S-108	5	545	0
241-S-109	13	520	0
241-S-110	96	293	0
241-S-111	76	413	0
241-S-112	6	614	0



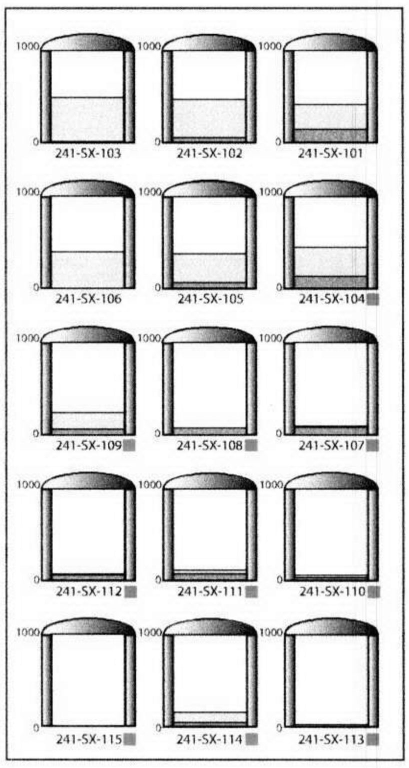
TX-Tank Farm- 1947-48
18 @ 758,000 GAL. Tank Capacity, Single-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-TX-101	74	17	0
241-TX-102	2	215	0
241-TX-103	0	145	0
241-TX-104	34	32	3
241-TX-105 ■	8	568	0
241-TX-106	5	343	0
241-TX-107 ■	0	30	0
241-TX-108	6	123	0
241-TX-109	363	0	0
241-TX-110 ■	37	430	0
241-TX-111	43	322	0
241-TX-112	0	634	0
241-TX-113 ■	93	546	0
241-TX-114 ■	4	528	0
241-TX-115 ■	8	546	0
241-TX-116 ■	66	531	2
241-TX-117 ■	29	452	0
241-TX-118	0	256	0



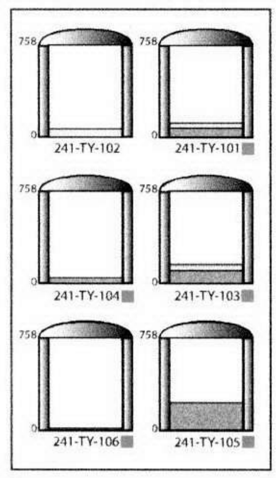
SX-Tank Farm- 1953-54
15 @ 1,000,000 GAL. Tank Capacity, Single-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-SX-101	144	269	0
241-SX-102	55	412	0
241-SX-103	8	483	0
241-SX-104 ■	136	310	0
241-SX-105	65	311	0
241-SX-106	0	397	0
241-SX-107 ■	79	16	0
241-SX-108 ■	73	0	0
241-SX-109 ■	58	183	0
241-SX-110 ■	29	27	0
241-SX-111 ■	76	39	0
241-SX-112 ■	56	19	0
241-SX-113 ■	19	0	0
241-SX-114 ■	42	115	0
241-SX-115 ■	4	0	0



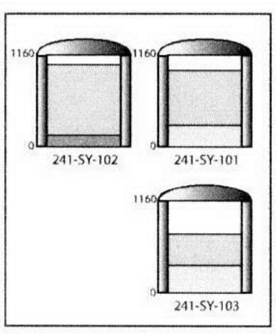
TY-Tank Farm- 1951-52
6 @ 758,000 GAL. Tank Capacity, Single-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-TY-101 ■	72	46	0
241-TY-102	0	69	0
241-TY-103 ■	103	52	0
241-TY-104 ■	43	0	1
241-TY-105 ■	231	0	0
241-TY-106 ■	16	0	0



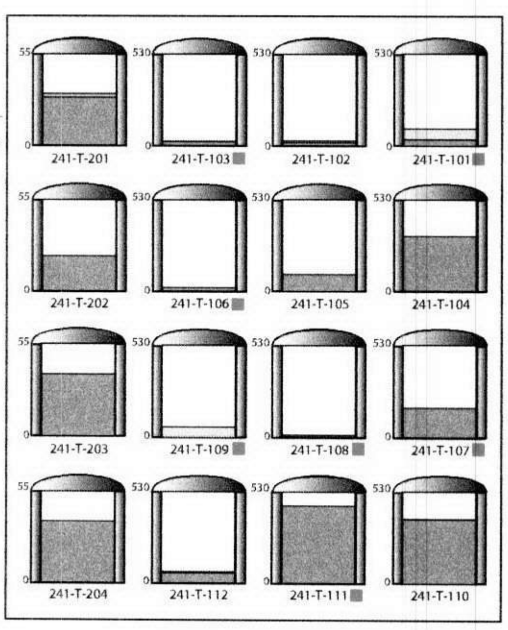
SY-Tank Farm- 1977
3 @ 1,160,000 GAL. Tank Capacity, Double-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-SY-101	0	275	692
241-SY-102	145	0	893
241-SY-103	0	342	396



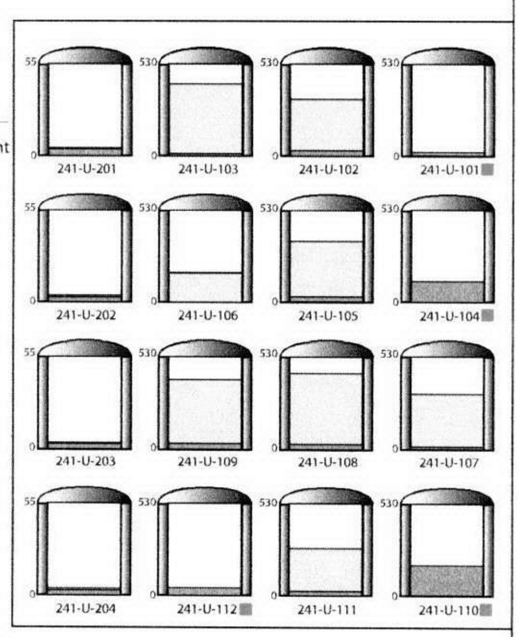
T-Tank Farm- 1943-44
12 @ 530,000 GAL. Tank Capacity, Single-Shell
4 @ 55,000 GAL. Tank Capacity, Single-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-T-101 ■	37	63	0
241-T-102	19	0	13
241-T-103 ■	23	0	4
241-T-104	317	0	0
241-T-105	98	0	0
241-T-106 ■	22	0	0
241-T-107 ■	173	0	0
241-T-108 ■	5	11	0
241-T-109 ■	0	62	0
241-T-110	369	0	1
241-T-111 ■	447	0	0
241-T-112	60	0	7
241-T-201	29	0	2
241-T-202	21	0	0
241-T-203	37	0	0
241-T-204	37	0	0



U-Tank Farm- 1946-49
12 @ 530,000 GAL. Tank Capacity, Single-Shell
4 @ 55,000 GAL. Tank Capacity, Single-Shell

Tank	Sludge (Kgal)	Saltcake (Kgal)	Supernatant (Kgal)
241-U-101 ■	24	0	0
241-U-102	34	293	1
241-U-103	13	405	1
241-U-104 ■	122	0	0
241-U-105	32	321	0
241-U-106	0	170	2
241-U-107	15	305	0
241-U-108	29	406	0
241-U-109	35	366	0
241-U-110 ■	176	0	0
241-U-111	26	246	0
241-U-112 ■	45	0	0
241-U-201	4	0	1
241-U-202	3	0	1
241-U-203	3	0	1
241-U-204	3	0	1



LEGEND: Sludge, Saltcake, Supernatant, Available Space, Assumed/Confirmed Leaker ■

Data Derived From Waste Tank Summary Report Dated 9/30/02

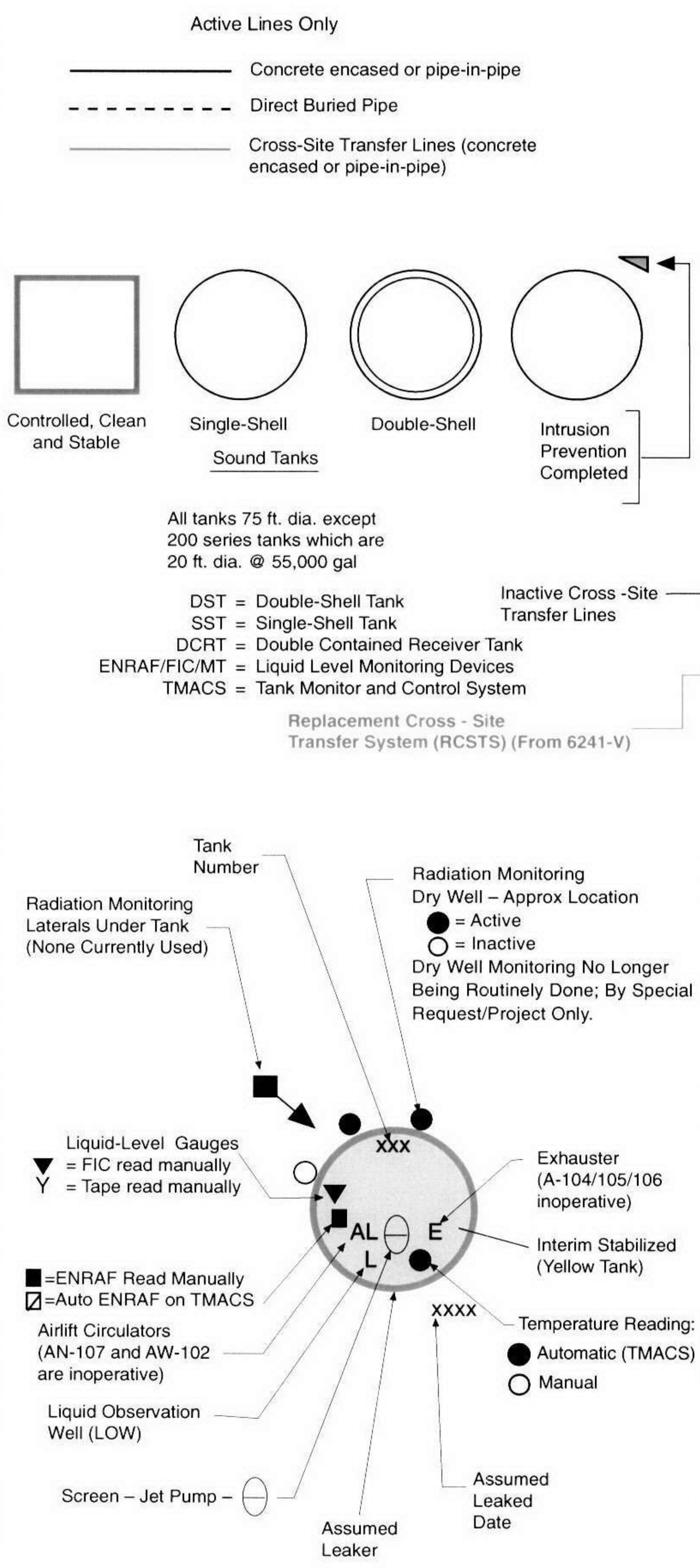
CH2MHILL

\\AP012\CHARDOCS\All By Staff Member\Naiknimbalkar\Tank Figures\200 West Tank Profile 093002.pdf

Figure E-5

Hanford
Tank Farm Facilities
200 East

Note:
All single-shell tanks were removed from service (not allowed to receive waste) on or before November 21, 1980



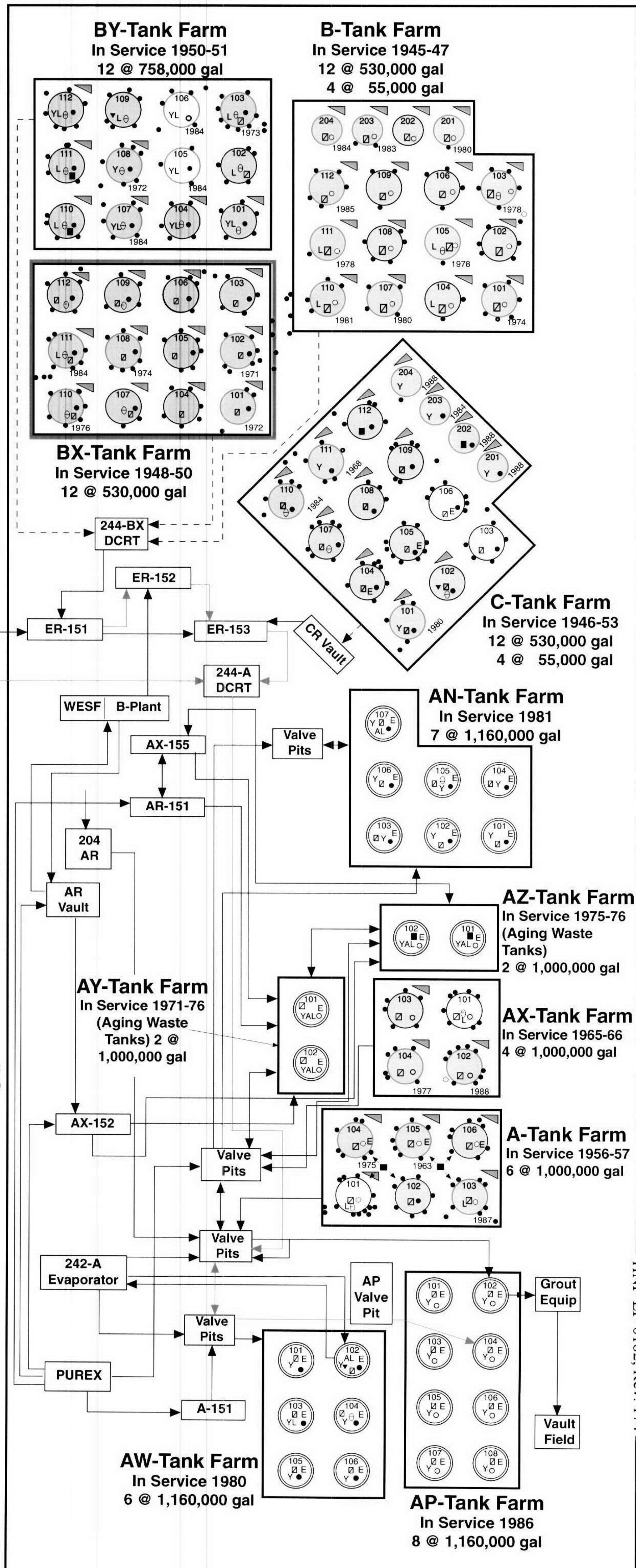


Figure E-6
(Schematic)

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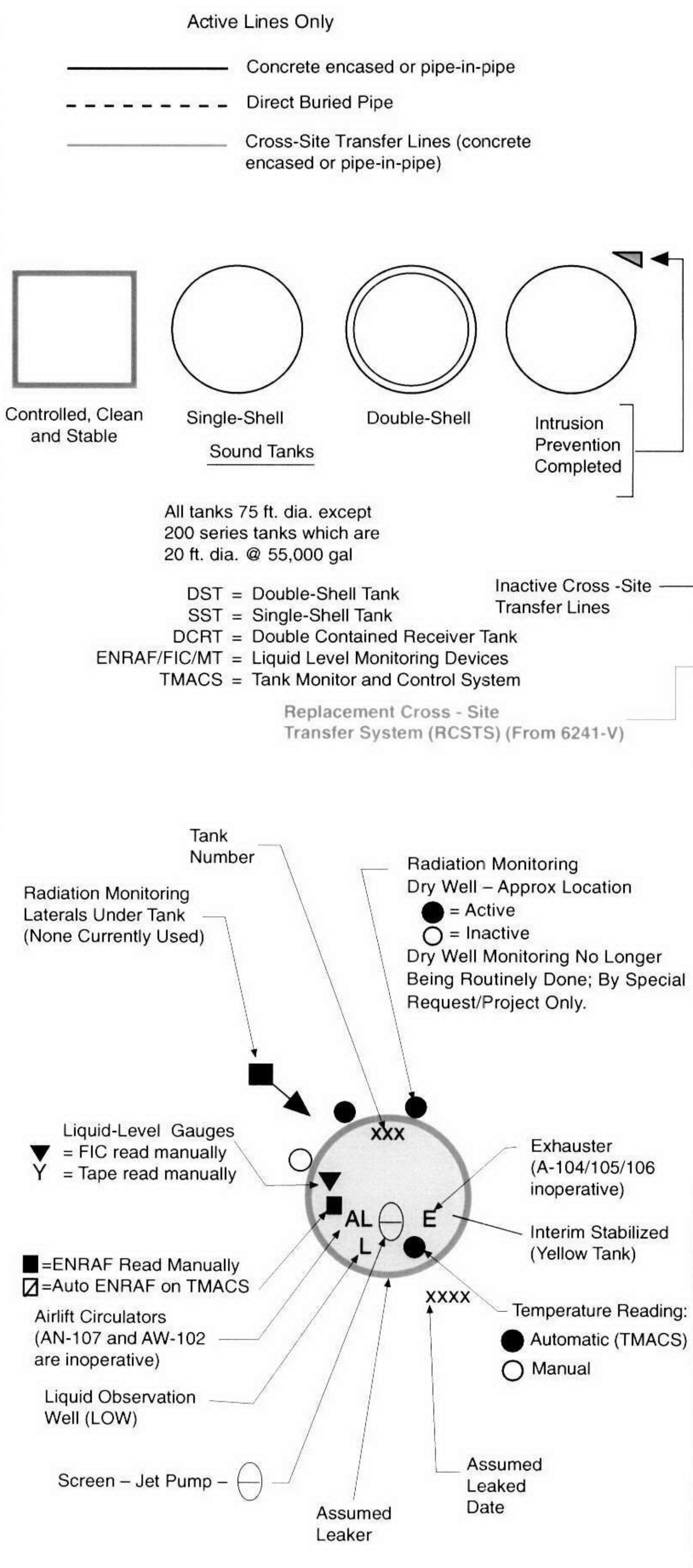
Hanford Tank Farm Facilities 200 East

Note:
All single-shell tanks were removed from service (not allowed to receive waste) on or before November 21, 1980



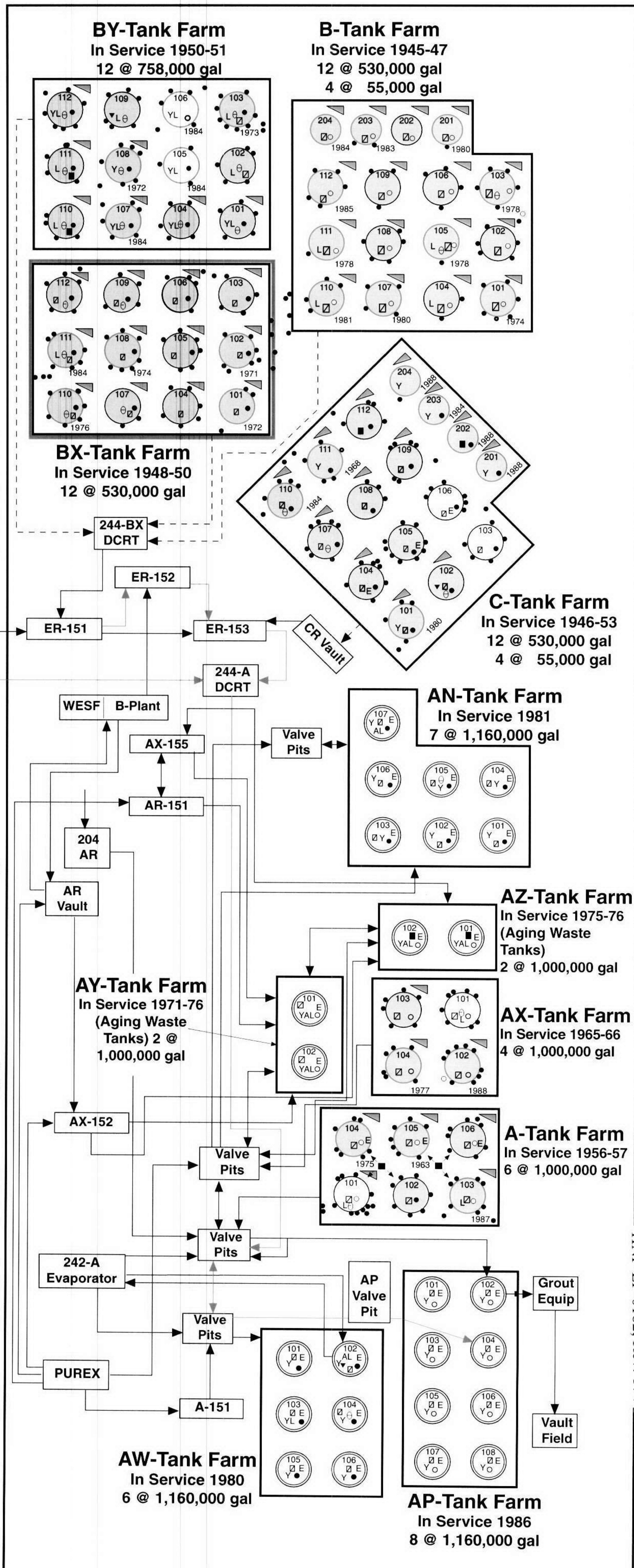


Figure E-6
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